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DIVERSITY & DEBATE IN VISUAL COMMUNICATION DESIGN EDUCATION:  
A COMPARATIVE ANALYSIS OF FIVE NORTH AMERICAN SCHOOLS

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*To my father*



## TABLE OF CONTENTS

### SECTION 1

Abstract	1
Introduction	2
Chapter 1: Design Education: Background and Historical Precedent	5

### SECTION 2

Chapter 2: Visual Communication Design: Five Post-Secondary Schools	10
University of Alberta: Edmonton, Canada	10
California Institute of the Arts: Valencia, California	19
Carnegie Mellon University: Pittsburgh, Pennsylvania	24
School of Visual Arts: New York, New York	30
Illinois Institute of Technology: Chicago, Illinois	36
Chapter 3: Faculty Questionnaire	42

### SECTION 3

Chapter 4: Student Work from each of the Five Programs	54
University of Alberta: Edmonton, Canada	54
California Institute of the Arts: Valencia, California	59
Carnegie Mellon University: Pittsburgh, Pennsylvania	64
School of Visual Arts: New York, New York	69
Illinois Institute of Technology: Chicago, Illinois	74

Chapter 5: Alumni Questionnaire	79
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### SECTION 4

Chapter 6: Comparative Analysis: Current Issues in Visual Communication Design Education	92
Conclusion	121
Appendix	125
Bibliography	169
Acknowledgements	172



## ABSTRACT

Visual communication design is a creative profession not easily defined. Scholars and design practitioners engage in debate over the essential nature of their field. Determining the role of the graphic designer within an increasing complex network of computer-based technology and interdisciplinary activity presents an unprecedented challenge. Diverse notions of the identity of communication design shape the nature of countless educational programs. The research undertaken in this Master of Design thesis focuses on visual communication design as taught and practiced within five North American post secondary institutions. The schools investigated are: The University of Alberta in Edmonton, Canada; California Institute of the Arts in Valencia, California; Carnegie Mellon University in Pittsburgh, Pennsylvania; The School of Visual Arts in New York City, and Illinois Institute of Technology in Chicago, Illinois. Attributes unique to each school's particular approach are analyzed within a broad spectrum of contemporary issues and influences. Research findings are supported by comparative curriculum diagrams, faculty and alumni questionnaires and examples of student work. The North American scope of the project facilitates discourse and connections with the various schools, their differing methodologies, design aesthetics, conceptual frameworks, and contextual forces. The goal is to develop a broader understanding of the ways in which graphic design is defined and taught today.



## INTRODUCTION

The investigative analysis of the various visual communication design schools is organized into four primary sections of study. First, historical precedents in design education are discussed as the forerunners of formal study in various design disciplines that include graphic communication. The intent is to provide information concerning the temporal positioning of the contemporary curriculum structures to be compared. The second section presents each of the five schools individually, providing an overview of undergraduate and graduate programs, and introducing the uniqueness of each approach. The design terrain of each school is mapped through curriculum charts that are further supported by a complete listing of course descriptions in the appendix. The section concludes with interviews conducted with department heads and primary faculty correspondents from each of the five schools.

The visual component compiled in section three of the study is comprised of various examples of student work. The projects were collected from each of the five post-secondary institutions, and were selected to provide a visual sampling of the types of studio assignments completed within the various programs. Included in this portion of the thesis are responses from alumni to a questionnaire that reveals individual student experiences and reflections. Following is a section of research that identifies key educational issues in the North American context. The diversity of the manners in which the issues are addressed in each program are diagrammed and discussed. The concluding section of the study synthesizes the data collected and provides an overview of the current debates in visual communication design education.

The five schools investigated—The University of Alberta, California Institute of the Arts, Carnegie Mellon University, The School of Visual Arts, and Illinois Institute of Technology—were selected for a variety of reasons. Each school exemplifies a unique and reputable approach to Visual Communication Design education. California Institute of the Arts was initially chosen because of its creative leadership in the integration of design and fine arts. The University of Alberta is unique in its offering of the *Pathways* program, which is characterized by interdisciplinary streams with university departments such as Business, Computer Science, and Social Sciences. Carnegie Mellon is currently an academic leader in the field of new media and interaction design, particularly at the Masters level. The School of Visual Arts was selected due to its reputation as housing one of the top graphic design and advertising programs in the United States. The commercial context of the Big Apple distinguished SVA from other schools. Finally, the Institute of Design at Illinois Institute of Technology is a highly regarded program that caters specifically to graduate students, and, until recently, provided the continent's only PhD program in design. Certainly, there are other excellent schools in North America that offer programs in visual communication design. However, the spectrum of diversity offered by the five chosen schools provides a sufficiently broad research base from which to study contemporary issues in design education.

It is important to note the variety of defining terminology in relation to the field of 'graphic design'. The variety of post-secondary program names provides testimony of the degree of diversity and debate in professional and academic spheres. At the University of Alberta, the program is titled "visual communication design," with degrees granted under the distinction of Bachelor of Design and Master of Design. The programs are offered by the university's Department of Art and Design. CalArts and the School of Visual Arts use the more traditional term 'graphic design' to define their programs which both operate in private art schools. SVA also offers an advertising stream which is closely linked to the course of studies in graphic design. Both schools offer Bachelor of Fine Arts and Masters degrees (Master of Fine Arts at CalArts, and Master of Design at SVA).

Carnegie Mellon University and Illinois Institute of Technology officially define the field in question as 'communication design'. The undergraduate degree at CMU is a Bachelor of Fine Arts offered by the Department of Design. The two Masters programs offered are: Master of Design and Master of Arts (jointly offered by Interaction Design and English). At IIT, the term 'communication design' is used to describe a branch of their design program that also encompasses product design. Master of Design, Mas-



ter of Science, and PhD programs are offered. Although each variation in terminology—graphic design, visual communication design, and communication design—have their own referential basis and conceptual biases, the terms are, in some cases throughout the thesis text, used interchangeably. The term 'Visual Communication Design' is used within the title of the project as it most closely defines the writer's own educational experience.

The completion of *Diversity and Debate in Visual Communication Design: A Comparative Analysis of Five North American Schools* has involved a multitude of research methodologies. Initially, school catalogs, bulletins, web sites, and general information and promotional materials were consulted to establish the general identities of the five programs. Further curriculum information provided and course descriptions were utilized to establish a means of consistently documenting and developing curriculum maps. Whenever possible, additional information regarding course content and program philosophies was gathered. Much of the information collected depended on the assistance of the contacts established at each school. E-mail correspondence was a critical means of bridging the long distances between the University of Alberta and other schools. The establishment of primary contacts at each program facilitated ongoing inquiry and dialogue with key faculty members. Often, department heads and other correspondents were able to refer other individuals (whether professors, practitioners, or students) who generously provided additional information concerning specialized topics of concern. Interviews were designed to probe specific information regarding program identities and positioning on issues of pedagogical debate. Diversity of curricular interest, underlying philosophical domain and visual languages were probed via faculty and alumni questionnaires.

Over the course of many months, student work was requested and collected. Additionally, undergraduate and graduate level course syllabi and project descriptions were solicited. Although the consistency of the quantity and quality of information provided could not be guaranteed, an effort was made to ensure an appropriate degree of comparable resources and research data. Books (of limited number), periodicals, articles, and proceedings from conferences dealing with issues of design education were consulted when available. Bibliographies of such provided further reference material. Professional design work by faculty members and alumni was perused, often through individual web sites. Compilations celebrating award-winning student work were also reviewed. Information packages were requested from reputable professional organizations such as The American Institute of Graphic Design (AIGA) and American Center for Design (ACD).

With support from the University of Alberta's *J. Gordin Kaplan Graduate Student Travel Award*, a visit was made to California Institute of the Arts. The funding provided a wonderful opportunity to meet with faculty and students, sit in on studio classes at both the Bachelor and Masters levels, and collect further information concerning the nature of the program and the general cultural surround. At the University of Alberta, arrangements were made to observe end-of-term portfolio reviews in several classes. Certainly, personal enrollment and associated teaching experience at the University of Alberta shaped interpretations of the visual communication design program in general. In many ways, the challenge of conducting research throughout the course of investigation confirmed the need for documenting pertinent information in the area of visual communication design education.

As noted, the primary objective of the research conducted is to provide a knowledge and conceptual base through which to broaden an understanding of the ways in which graphic design is defined. More specifically, the thesis aims to unveil the varied approaches taken by leaders in the field of visual communication design education. In mapping the terrain of diversity and topics of debate, it is possible to associate schools within particular areas of philosophical intent. The challenge of the project is to gather information, design a matrix by which to position the diverse variety of curriculum structures, and project the comparative factors into a larger realm of understanding and application.



An interest in the profession of design education inspired the selection of the thesis topic. There are few publications dedicated to the topic in question, and there was an identified need for self-directed study in order to facilitate currency of knowledge. The research findings generated a valid definition of those issues that are of greatest importance in graphic design education in North America today. The variety of ways in which the five programs address the issues at hand speaks of the complexity and scope of educational structures as implemented at private art colleges, technical schools, and public universities. Indeed, a multitude of contextual forces, including cultural, political, and geographical factors, shape the distinct identities of the programs in question. It is not the intent of the project to try to address each and every factor of influence. Rather, the objective of the work is to extract that which is of greatest significance and value to the design educator and student investigator. Essentially, the compilation of research provides a resource of information that allows one to better understand and appreciate the nature of a given type of educational experience within a much larger context of academic and industry activities. The notion of an ideal curriculum in visual communication design education is debated in the final synthesis of data. Concluding remarks reflect a generalist perspective, having investigated more specific notions of diversity within the spectrum of the five schools researched.



## CHAPTER 1

### DESIGN EDUCATION: BACKGROUND AND HISTORICAL PRECEDENT

One cannot begin to investigate the complexity of graphic design education without first taking a look at the major educational influences that have assisted in shaping the diverse spectrum of post-secondary systems today. Although the history of visual communication design in schools is a relatively recent one, two primary institutions are noteworthy for their molding of the foundations that much of present-day programs are built upon. The first, of course, is the Bauhaus, with its emphasis on art and craft and the development of cross-disciplinary studio fundamentals. The second, also emerging in Germany, is the Hochschule für Gestaltung at Ulm, significant for its rational processes centered around production methods and, primarily, industrial design. There are, without question, many forces that contribute to the form and variety of curriculum structuring. An investigation of the principal characteristics of distinguished precedents fosters a better understanding of contextually based forces that influence contemporary programs of study in graphic design.

The Bauhaus was founded in Weimar, Germany in 1919. The arrival of the legendary art and architectural school took place in the years of ferment following World War I. The initial development of the Bauhaus was driven by the enthusiasm for a renewed world, a spirit that emerged from a defeated country.<sup>1</sup> The school embraced an innovative approach to design education and exerted a tremendous influence on international art and culture. The name 'Bauhaus' was derived from 'bauer', meaning to build, a notion that included the idea of creating in a spiritual sense, and 'haus', which referred to the building or house itself.<sup>2</sup>

Walter Gropius, founder of the Bauhaus, published a proclamation of the school in 1919, attracting artists and students from all over Europe, and later, America. The proclamation declared that the complete building was to be the ultimate aim of the visual arts—a community that encompassed architects, sculptors, and painters. The crafts were attributed hierarchical primacy, and it was expected that all artists and designers excel at their particular craft, as such proficiency marked the pathway to creative genius. Gropius later described the mission of the school in the following excerpt from *The New Architecture and the Bauhaus*:

The object of the Bauhaus was not to propagate any 'style', system, formula, or vogue, but simply to exert a revitalizing influence on design. We did not base our teaching on any pre-conceived idea of form, but sought the vital spark of life behind life's ever-changing forms. The Bauhaus was the first institution in the world to embody this principle in a definite curriculum. To further the cause of its ideals, and maintain the vigor and alertness of that community spirit in which imagination and reality can alone be fused, it had to assume the responsibilities of leadership.<sup>3</sup>

The Bauhaus curriculum facilitated experimentation through a broad scope of innovative activities, which included research concerning universal laws of psychology in relationships between form and colour, and the invention of reflected light choreography, which involved moving compositions of coloured shapes projected onto transparent screens. The hallmark of the Bauhaus program was the cooperative union of the arts and crafts. Course subjects were taught by two teachers—one artist/designer and one master craftsman. Distinguished faculty initially included Johannes Itten, Paul Klee, Wassily Kandinsky, Lyonel Feininger, and Oskar Schlemmer. Later, individuals such as Laslo Moholy-Nagy, Josef Albers, and Marcel Breuer were appointed to the renowned Bauhaus faculty.

The diverse combination of talented artists, designers, and craftsman ensured that class and studio work covered an extensive spectrum of interdisciplinary creativity. At the onset of a Bauhaus education, students studied painting techniques and experimented with a variety of materials, both natural and artificial. Studies in the crafts, industrial design and architecture followed. Investigations concerning nature



and handcraftsmanship progressed to innovative projects that centered around the machine and embraced advances in science and technology. The following outline describes the basic curriculum structure employed at the Bauhaus:

*1. The Preliminary Course:*

Six months of elementary instruction in problems of form, combined with practical experiments with different materials in the workshop for beginners.

Result: Admission to one of the more advanced workshops.

*2. Instruction in a Craft:*

A three year course in the workshops after signing legal articles of apprenticeship. Advanced instruction in form.

Result: Journeyman's Diploma of the Chamber of Crafts

*3. Instruction in Architecture:*

Practical participation in building under construction and independent architectural training in the Bauhaus Research Department.<sup>4</sup>

In 1925-1926, the Bauhaus moved to Dessau, where it was forced by the Nazis to close in 1933. Upon the school's closure, many of the world-renowned designers and educators dispersed to various countries to continue their work as teachers and practitioners. L. Hirschfeld-Mack, who once taught at the Bauhaus, offers a succinct summation of why the Bauhaus example has continued in its importance:

1. Because it faced the problem of good design for mass production articles, some of the best of which originated in the experimental and research work of the Bauhaus,
2. Because it bridged the gap between art and industry,
3. Because it broke down the barriers separating the 'fine' from the 'applied' arts,
4. Because it developed appreciation of a new and modern kind of beauty, as it turned away from the established academic methods of art teaching, based on a misunderstanding of the High Renaissance 500 years ago, and created an elementary course with new methods in art teaching, since adopted in most progressive art schools in industrial societies, and
5. Because its influence has spread and is still spreading throughout the world.<sup>5</sup>

Although the Bauhaus experience could never be repeated, many schools in North America (and other areas of the world) emerged and reaffirmed the general principles of the Bauhaus, pursuing similar educational objectives. One such school, the Institute of Design (originally named the New Bauhaus) at Illinois Institute of Technology in Chicago, was founded by Laslo Moholy-Nagy in 1937. Moholy-Nagy had taught at the Bauhaus in Germany, and his goals for the new school reflected the highest levels of idealism. Programs of study included sculpture, graphics, poetry, sciences, photography, industrial design and music. In explaining the intrinsic nature of the New Bauhaus, alumnus Nathan Lerner states: "...the man, the educational techniques, and all the disciplines were fused and inseparable, in accordance with Moholy's overriding belief in the development of the total person as opposed to the training of a one-sided specialist."<sup>6</sup> In addition to Moholy-Nagy, other Bauhaus leaders immigrated to the U.S.: Ludwig Mies van der Rohe and Herbert Bayer also settled in Chicago, Walter Gropius and Marcel Breuer began teaching in the architecture program at Harvard, and Josef Albers began a professorship at Yale.

Katherine McCoy, a lecturer at the Institute of Design, states: "After World War II, the Bauhaus idea had a major impact on design schools in the United States. Many adopted the model in its pure form, requiring design students in all disciplines to begin with the system. Today, if one peels away the layers in any design program, the persistent residue of this movement is evident."<sup>7</sup> McCoy also notes that unfortunately, the Bauhaus idea that design fundamentals should precede applied design has been limited to introductory courses in art and design, as after the first year, students quickly move into areas of specialization, focussing on applied projects that simulate professional practice.



The Hochschule für Gestaltung (HfG) at Ulm is considered one of the most important design schools of its time and, like the Bauhaus, influenced subsequent curriculum patterns at design schools throughout the world. HfG operated in Ulm, West Germany from 1953-1968. During these years, the international design school developed the 'Ulm Model' of design education, a curriculum structure based upon both theory and practicality. Rational methodology drew upon objective scientific approaches and advances in new technology.

The program at Ulm was primarily focussed on industrial product design. The term "industrial products" referred to "all objects designed for everyday use and for use in production, in administration, and in science, as well as in the building industry, and also the visual and linguistic vehicles of information disseminated through the modern mass media."<sup>8</sup> There were four official departments at the HfG: Product design, Visual Communication, Building, and Information. Filmmaking was later added. HfG diplomas were granted at the end of four years of study, which involved an initial one-year Basic Course and three years in one of the specialized departments. Instruction in practical design work took place alongside classes and seminars.<sup>9</sup> Other aspects of the educational experience included studies in design-related scientific methodology and social and cultural responsibility.

Ulm School of Design was influential in its establishment of knowledge in areas such as basic design, semiotics, design methodology and planning tools. In regard to 'graphic design', the Visual Design Department was closely linked to the Information Department. As documented in the HfG curriculum, "The aim of the training in the Department of Visual Design is the education of specialist professionals in every field of advertising design, including book design, exhibition design, etc.: specialists who are not merely trained in one limited field, such as typography, graphics, or photography, but have mastered all these fields and can combine them."<sup>10</sup>

The Ulm School is generally regarded as one of the most influential educational establishments. Although HfG (Ulm) is sometimes considered an extension of the Bauhaus, its underlying philosophy was considerably different:

Ulm School did not see 'design' as an individually centered, art and craft activity. The emphasis was not on 'self-discovery', on awakening the intuitive, inner personality; but in seeing designers' collective responsibility as one of the important contributors to man-made environments. The 'Ulmers' were idealists—they believed that the quality of human life can be improved by improving the quality of the built environment. If all the factors could be considered—rationally and objectively—then it would be possible to find workable solutions to all the problems—no matter how complex they may be. The factors were not just factors of material, function, and production, but social, economical, political, behavioral factors...<sup>11</sup>

When the Ulm school closed its doors in 1968, many of its teachers and graduates dispersed abroad, further expanding the HfG influence. The curriculum established at Ulm has since served as a guide in the periphery, in countries such as Mexico and Brazil. The marketability of the notions of stackability, ergonomic efficiency, and sign systems with 'semiotic' appeal ensured a transfer of design education and production outside the confines of the school.<sup>12</sup> Perhaps the most significant contribution of the Ulm model lies in the general acceptance and promotion of a definition of design or planning, also regarded as *Gestaltung*.

Design is activity that involves planning; it is concerned to control its own consequences. It is hard intellectual work and demands meticulously informed decisions. It is not always primarily concerned with appearances, but with every aspect of its consequences: production, handling qualities, perceptual qualities; also economic, social, and cultural effects. Objects to be designed must not be seen in isolation but in conjunction with the contexts in which they are to be placed.



Above all, the designer should always step back and take a critical look at the thing he is looking on: how you design has a decisive impact on the product. A critical “process consciousness” is recommended.<sup>13</sup>

When taking a look at graphic design education specifically, it is clear that its history in North America is rather short. The field of graphic design took root in the capitalist market-based economies of the Industrial Revolution. The advent of mass production demanded a means of communicating information about products and services. In the early 1900's, when advertising emerged in the United States as a viable industry, commercial artists were in great demand.<sup>14</sup> Correspondence schools became the educational means of establishing oneself within the new profession. The largest and most reputable of the art correspondence schools was the Federal School of Commercial Designing located in Minneapolis, with branch offices in Chicago and New York City. The school was founded in 1919, and offered some 3,000 home-study participants training in illustration, board layout, and lettering. Steven Heller, author of *The Education of a Graphic Designer*, notes that “The existence of these [correspondence] schools challenges the myth that in the nascent period of commercial art, all skills were learned on the job and a formal education was unnecessary.”<sup>15</sup> Prior to industrialization and the American correspondence school, European typefoundries and printshops had provided apprenticeships. Additionally, small architecturally-based ateliers provided settings in which students emulated their masters, developing skills in drawing the classical orders and assisting with the elementary aspects of professional work.

Since the time of the correspondence schools, education in the areas of commercial art and graphic design has evolved tremendously. Post-secondary education in design is now offered by various types of institutions, including public universities, colleges, and private art schools. Undergraduate diplomas and degrees, which vary in educational standards, range from two to four (and sometimes five) years of study. Masters programs generally require two or three years to complete. Several PhD programs are now available and facilitate advanced research in visual communication design. The increased amount of time spent in school “is commensurate with the increased demands that business has made on the profession.”<sup>16</sup> Students may specialize in a multitude of areas such as: illustration, corporate identity, packaging, editorial design, animation, Internet and web-based design, environmental graphics, interaction design, and the list goes on... Graduates are obtaining professional employment as conceptualists, strategic planners, aestheticists, design directors, managers and consultants.

The field of graphic design has become increasingly complex, with schools competing to secure a particular niche within an enormous industry. The fact that visual communication design lacks a governing body to certify graphic designers (based on educational qualifications and experience) adds to the challenge of defining the field as a distinct profession. In the last twenty years, the number of graphic design programs in North America, and the U.S. in particular, has increased dramatically. However, the quality of many new programs is questionable. In an article entitled “Education in an Adolescent Profession,” Katherine McCoy contends: “Art schools and university art departments have been slow to realize that design is not simply a commercial application of fine arts ideas and processes. Acceptance of graphic design as a separate and distinct discipline—with significantly different intentions, history, theory, methods, and processes—has been quite slow.”<sup>17</sup> Advances in computer technology are paramount in the controversy of shifting paradigms in education, theory, and practice. Educators debate the possibility of establishing a standard curriculum that ensures a well-rounded and technologically up-to-date education. An investigation of past models and influences in the evolution of design education facilitates a better understanding of the current varieties in visual communication design curriculum.



*Footnotes*

1. Hirschfeld-Mack, L. *The Bauhaus*, Longmans, Green and Co. Ltd., Victoria, Australia, 1963, p. 1.
2. Ibid.
3. Gropius, Walter. *The New Architecture and the Bauhaus*, translated by P. Morton Shand, New York, Museum of Modern Art, 1936.
4. Hirschfeld-Mack, p. 7.
5. Ibid, p. 8.
6. Boxer, Adam J. (organized by). *The New Bauhaus: School of Design in Chicago*, Banning & Associates, New York, NY, 1993, p. 13.
7. Heller, Steven, ed. *The Education of a Graphic Designer*, Allworth Press and the School of Visual Arts, New York, NY, 1998, p.5.
8. Lindinger, Herbert, ed. with translation by Britt, David. *Ulm Design: The Morality of Objects*, The MIT Press, Cambridge, Massachusetts, 1991, p. 30.
9. Ibid, p. 31.
10. Ibid, p. 122.
11. Trivedi, Kirti (selected by). *Readings from Ulm: Selected Articles from the Journal of the Ulm School of Design*, published on the occasion of the international seminar “Design Education: Ulm and After,” Industrial Design Centre Printing Press, Bombay, 1989, Introduction.
12. Lindinger, p. 118.
13. Ibid, p. 119.
14. Heller, p. xi.
15. Ibid, p. xii.
16. Ibid.
17. McCoy, Katherine. “Education in an Adult Profession” in *The Education of a Graphic Designer*, edited by Steven Heller, Allworth Press and the School of Visual Arts, New York, NY, 1993, p. 4.



## CHAPTER 2

### VISUAL COMMUNICATION DESIGN: FIVE POST-SECONDARY SCHOOLS

#### UNIVERSITY OF ALBERTA

The University of Alberta is located in Edmonton, in the province of Alberta. The city of Edmonton has a population of 875,000 and is one of the country's major cultural centers. The U of A has grown since 1908 to become one of the five largest post-secondary institutions in Canada. Student enrollment totals nearly 30,000—over 4,000 of whom are graduate students. It is the province of Alberta's major degree granting institution. The Faculty of Graduate Studies alone offers more than 76 masters and 64 doctoral programs, and 190 areas of research.

The Department of Art and Design is part of the Faculty of Arts, and consists of three main units—the divisions of Fine Arts, The History of Art and Design, and Design. Fine Arts offers majors in painting, sculpture, and printmaking. The Art History division offers classes in the history and theory of Art and Design. The division of Design Studies provides courses in Industrial Design and Visual Communication Design. The department grants the following professional undergraduate degrees: Bachelor of Fine Arts, Honors Degree in the History of Art and Design, and the Bachelor of Design. Design courses have been offered in the department for over 25 years, and, initially, were part of the Fine Arts degree program. "In September 1994, the department launched a separate Bachelor of Design degree in response to the growing need for concentrated studies in design as a distinct discipline."<sup>1</sup> The Department of Art and Design offers three graduate level professional degrees: the Master of Fine Arts, Master of Arts in the History of Art and Design, and the Master of Design.

The Division of Design Studies continues to evolve in response to the changing needs of the design disciplines. Four years ago, the Department of Art and Design reformulated the structure of its undergraduate program in design, introducing a pathways system whereby students might gain knowledge and experience in areas of study outside of the department. Dr. Desmond Rochfort, past Department Chair describes the initiative as follows:

The initiative known as the *Pathways* system created a framework of study that acknowledged that design was no longer a discipline centrally concerned with forms, materials, and processes, and exclusively focussed on the creation or the design of products or artifacts. Rather it saw design as a discipline and as a practice that stood at the center of a system of overlapping disciplines, that design educators could no longer afford to ignore if what they were teaching was to remain relevant.<sup>2</sup>

The five pathway options are Business and Marketing, Engineering with Business and Marketing (Industrial Design majors only), Printmaking, Computer Science, and Social Sciences. The Business and Marketing pathway allows students to take advantage of the expertise available in the U of A's Faculty of Business. Courses taken as electives include economics, accounting, business practice, consumer studies, financing, and marketing. Graduates are better equipped to work on design projects for business and industry—from the early stages of concept development to advertising and final package presentation. Additionally, students learn valuable strategies regarding the organization and set up of personal business practices. The Engineering with Business and Marketing Pathway is for Industrial Design majors only, and adds the dimension of shared knowledge with the field of Engineering, with the goal of creating commercially and functionally effective products.

The Department of Art and Design has a well-established Printmaking program, and via the Printmaking pathway, students are able to apply aspects of printmaking processes and aesthetics to their work. The intent is to foster intuitive fine art processes in graphic design and defy the constraints of commercial printing processes. One cannot ignore the increasingly strong connection between computer science and



design. Through the Computer Science pathway, design students learn how to combine the knowledge frameworks from both disciplines in the development of software and the analysis and understanding of human factors in computer interface systems. The Social Sciences pathway, the newest of the pathways (launched in September 1999), addresses the need for learning and applying the methodologies of the social sciences in user-centered design practice. Students electing this pathway balance their design education with courses in Anthropology, Psychology, and Sociology. In the spirit of the Pathways programs, University of Alberta students enrolled in Bachelor of Fine Arts, Bachelor of Arts, Bachelor of Education, and Bachelor of Science programs are able to access courses in Visual Communication Design as either an area of concentration or in the form of open options.

At the U of A, the Visual Communication Design program is primarily concerned with providing a fundamental understanding of the visual aspects of mass communication.<sup>3</sup> There is an emphasis on user-centered methodology, the cultural function of design, and the development of socially responsible design. The areas of information design and design for educational materials are given priority within the curriculum. Interdisciplinary processes are critical to program structuring, and provide the impetus for the *Pathways* initiative. In addition to the pathway options, undergraduate students may select the general program route in Visual Communication Design. Generally speaking, pathways follow the core curriculum of the general stream, with electives filled by courses meeting the specific needs of the various areas of concentration. The general route allows students to select options from any course offered in the Faculty of Arts or the Faculty of Science. For specific details on the various pathways, see the curriculum charts that follow and the appendix, which provides listings of course descriptions.

The first year of the four-year undergraduate programs is a shared foundation for Visual Communication Design (VCD), Industrial Design (ID) and Fine Arts. In the second year, students may begin specialized study in one of the two design programs. In the Visual Communication Design studio courses, the initial focus is on photography and typography as separate topics, allowing students to gain a basic understanding of the technical and conceptual aspects of each before engaging in projects which combine images and text. Throughout the program, design courses are complemented by studies in Art, Art History, Interdisciplinary Design, and the liberal arts and sciences. The broad scope of departmental offerings at the U of A provides for a rich and well-rounded educational experience. In the third year of study, problem solving skills in the organization and visual presentation of ideas and information are further developed through studio-based applications in a variety projects. Computer-based instruction requires the integration of digital processes with traditional communications methodology. Concentrated studies in the area of interaction design are offered at the senior level, encompassing multimedia, navigation, interface design, and hypermedia. Fourth year students are encouraged to devise programs that allow them to gain further experience in their particular areas of interest, and interact with professional designers, 'real' clients, and experts from other disciplines.

The Master of Design in Visual Communication Design implements at a more advanced level the interdisciplinary philosophy of the department's undergraduate degree. The program is dedicated to the small group of visual communication professionals who wish to prepare themselves for the highest level of activity in the design profession.<sup>4</sup> The thesis-based graduate degree involves one year of required courses, followed by one to three years to complete individual thesis projects. Initiated in 1972, the graduate program has remained a small design program, with current student totals ranging from three to six per year. The Department of Art and Design also participates in interdisciplinary doctoral degrees. In this program, various departments at the University of Alberta collaborate in the co-supervision of PhD students whose "theoretical objectives and previous studies make them eligible to pursue a research-oriented approach to the study of design."<sup>5</sup>

As explained by the coordinator of the MDes program, Jorge Frascara, "Our program in Visual Communication Design is characterized by working at the graduate level on projects of professional and social relevance. Projects always deal with the generation of new knowledge, and are developed in liaison with



relevant agencies inside or outside the University.”<sup>6</sup> Design is viewed as a problem-centered interdisciplinary activity in which each specific problem or situation determines the disciplines to be consulted. The U of A environment is highly conducive to this type of approach, with nearly 3000 academics within eighty different departments. Experts consulted in areas such as psychology, marketing, information science, and education often become members of the MDes candidate’s advisory committee. The department also encourages relevant connections with key individuals from government and the private sector. Visual Communication Design faculty maintain contact with national and international design organizations and institutions in order to facilitate ongoing exposure to current issues in academic research, design education, and professional practice.

*Footnotes:*

1. University of Alberta. *Bachelor of Design Brochure*, Edmonton, Alberta, p. 10.
2. Frascara, Jorge, ed. *Icograda Congress ADG Uruguay, Education Section*, 1998.
3. University of Alberta. *Web Site, Department of Art and Design, Visual Communication Design*, Introduction.
4. *From an unpublished program self-study prepared by Jorge Frascara*, 1999.
5. Frascara, Jorge, ed. *Icograda Congress ADG Uruguay, Education Section*, 1998.
6. *From an unpublished program self-study prepared by Jorge Frascara*, 1999.















# U of A

## BDes Computer Science Route

Year 1		Year 2		Year 3		Year 4	
Fall	Winter	Fall	Winter	Fall	Winter	Fall	Winter
Art 132 [6] Visual Fundamentals	Art 133 [6] Visual Fundamentals	Design 390 [6] Foundations of Visual Communication Design	Design 490 [6] Concepts & Systems in Visual Comm. Design	Design 590 [6] The Practice of Graphic Design	Design Studio/ 500 level*	Design Studio/ 500 level*	Design Studio/ 500 level*
Art 140 [3] Drawing I <sup>1</sup>	Design Studio 300 level*	Design Studio 400 level*	Art or Design Studio 300/400 level <sup>2</sup>	Art or Design Studio 300/400 level <sup>3</sup>	Art or Design Studio 300/400 level <sup>4</sup>	Art or Design Studio 300/400 level <sup>5</sup>	Art or Design Studio 300/400 level <sup>6</sup>
Art H 101 [3] Intro Art History I	Art H 102 [3] Intro Art History II	Art H 209 [3] History of Design <sup>1</sup>	Art History [3] 1 of 206, 256, 257 <sup>1</sup>	Design 483 [3] Des Issues Seminar <sup>1</sup>	Int D 200 [3] Sci, Tech, & Society <sup>1</sup>	Cmput 204 [3] Algorithms	Cmput 201 [3] Programming
English 101 [6] Critical Reading & Writing	Math 115 [3] Item Calculus II	Cmput 229 [3] Computer Graphics	Cmput 411 [3] Computer Graphics	Mark 301 [3] Intro Marketing <sup>1</sup>	Cons 220 [3] Consumer Behavior <sup>1</sup>	Cmput [3] 200/300/400 level	Cmput [3] 200/300/400 level
33 credit hours		33 credit hours		30 credit hours		27 credit hours	
				126 total credits			

### Footnotes

- 1 Either Fall or Winter term
- 2 Any 300 level studio course(s) in the Department of Art & Design
- 3 Any 300/400 level studio course(s) in the Department of Art & Design
- 4 Any 300/400/500 level studio course(s) in the Department of Art & Design

\*300 level Design Studios  
Des 395 Intro to Form, Visual Elements & Systems  
Des 396 Intro to Research & Theory in Design  
Des 375 Intro to Visual Presentation (Non-Electronic)  
Des 376 Intro to Visual Presentation (Electronic)

\*400 level Design Studios  
Des 495 The Image I (Photographic Imagery)  
Des 496 The Image II (Electronic Media)  
Des 497 Advanced Typography  
Des 498 Information Design

\*500 level Design options  
Des 595 Comm Design for Interactive Media I  
Des 596 Comm Design for Interactive Media II  
Des 597 Design Management



# U of A BDes Social Sciences Route

Year 1		Year 2		Year 3		Year 4	
Fall	Winter	Fall	Winter	Fall	Winter	Fall	Winter
<b>Art 132</b> [6] Visual Fundamentals		<b>Art 133</b> [6] Visual Fundamentals		<b>Design 390</b> [6] Foundations of Visual Communication Design		<b>Design 490</b> [6] Concepts & Systems in Visual Comm Design	
<b>Art 140</b> [3] Drawing <sup>1)</sup>		<b>Design Studio</b> [3] 300 level*		<b>Design Studio</b> [6] 400 level*		<b>Design Studio</b> [6] 500 level*	
		<b>Art H 102</b> [3] Intro Art History II		<b>Art H 209</b> [3] History of Design <sup>1)</sup>		<b>Art or Design Studio</b> [6] 3/4/500 level or 200/300/400 level Soc Sci	
		<b>Art H 102</b> [3] Intro Art History II		<b>Soc Sci</b> [3] 200/300 level A, P, S <sup>4)</sup>		<b>Design 483</b> [3] Des Issues Seminar	
		<b>Design Studio</b> [3] 300 level*		<b>Soc Sci</b> [3] 200/300 level A, P, S <sup>4)</sup>		<b>Design 483</b> [3] Des Issues Seminar	
		<b>English 101</b> [6] Critical Reading & Writing		<b>Psyco 105</b> [3] Ind & Soc. behavior <sup>1)</sup>		<b>Soc Sci</b> [3] 300/400 level A, P, S <sup>4)</sup>	
		<b>Anthr 101</b> [3] Intro Anthropology		<b>Anthr 110</b> [3] Cen / Age & Culture <sup>1)</sup>		<b>Soc Sci</b> [3] 300/400 level A, P, S <sup>4)</sup>	
		<b>Psyco 104</b> [3] Basic Psycho Processes		<b>Soc 210</b> [3] Intro Social Statistics <sup>1)</sup>		<b>Soc Sci</b> [3] 300/400 level A, P, S <sup>4)</sup>	
		<b>Soc 100</b> [3] Intro Sociology <sup>1)</sup>					
						<b>33 credit hours</b>	<b>33 credit hours</b>
						<b>30 credit hours</b>	<b>30 credit hours</b>
							<b>126 total credits</b>

<sup>1)</sup> Either Fall or Winter term

<sup>2)</sup> Any 300 level studio courses in the Department of Art & Design  
<sup>3)</sup> One of Anthr 207, Psyco 212, Soc 241  
<sup>4)</sup> Anthropology, Psychology, Sociology  
 Students may take half (3 credits, 1 term) &/or full (6 credits, 2 terms) courses to total 15 Soc Sci credits in Year 3, & 12 Soc Sci credits in Year 4

<sup>5)</sup> Any 300/400/500 level studio course(s) in the Department of Art & Design

<sup>6)</sup> 300 level Design Studios

Des 393 Intro to Form, Visual Elements & Systems  
 Des 395 Intro to Research & Theory in Design  
 Des 396 Intro to Visual Presentation (Non-Electronic)  
 Des 397 Intro to Visual Presentation (Electronic)  
 Des 497 Advanced Typography  
 Des 498 Information Design

<sup>7)</sup> 500 level Design options

Des 595 Comm Design for Interactive Media I  
 Des 596 Comm Design for Interactive Media II  
 Des 597 Design Management



# U of A

## MDes Visual Communication Design

Year 1		Year 2		Year 3		Year 4	
Fall	Winter	Fall	Winter	Fall	Winter	Fall	Winter
Des 692 10 Concepts & Criticism		Des 693 10 Analysis & Application		Thesis 909 10 Thesis Research Project		Thesis (continued) Thesis Research Project	
Art 630 3 Seminar in Related Disciplines		Design 483 3 Des Issues Seminar				Thesis (continued) Thesis Research Project	
Elective 3 400/500/600 level							



## CALIFORNIA INSTITUTE OF THE ARTS

California Institute of the Arts is situated in the hills of Valencia, California, just 30 freeway minutes north of Los Angeles. The campus overlooks the city of Santa Clarita, and is surrounded by views of mountain ranges to the north, east, and west. CalArts was founded in 1961 through the financial support of Walt and Roy O. Disney and Lulu May Von Hagen. The Institute was born via the merging of the Los Angeles Conservatory of Music, and the Chouinard Art Institute, two well-established professional schools. In 1971, the school was moved to its present site. Since its incorporation, CalArts has emerged as a renowned international leader in the various creative disciplines it represents.

The CalArts community is comprised of five distinct schools: the School of Art, the School of Dance, the School of Film/Video, the School of Music, and the School of Theatre. The Division of Critical Studies offers a general education curriculum aimed at complementing and broadening academic development. The inherent educational philosophy is described as follows: "CalArts was founded with the intention of creating an environment uniquely suited to interdisciplinary work. The close proximity of the Schools, each with its impressive resources and creative energies, stimulates an exchange of ideas throughout the Institute."<sup>1</sup> All programs are literally housed under one roof—the artistic/academic complex—a five-level, multi-winged building. The multifaceted educational experience includes regular exposure to a variety of performances (more than 250 per year!), informal concerts, and gallery exhibitions.

CalArts is a small independent college, with a total student body of approximately 1,100. On average, Californians constitute 40% of enrollment totals, with the remainder of students coming from other U.S. states and some 28 foreign countries. The Institute offers Bachelor of Fine Arts and Master of Fine Arts degree programs, as well as interschool degrees, undergraduate certificates, and advanced certificates. CalArts faculty members are practicing artists, designers, and scholars—actively engaged in their disciplines outside of the classroom. Visiting professionals from the United States and abroad add to the richness and currency of the student experience. The exceptionally low faculty to student ratio allows for a close and individualized mentor program.

The Graphic Design program at CalArts is part of the School of Art. The School of Art also offers separate programs in Art and Photography. Although the three programs are distinct from one another, a cross-disciplinary approach is encouraged. Individual artistic development through intensive educational experience is stressed as a primary goal of the School of Art.<sup>2</sup> Typography and computer graphics, like painting and sculpture, are viewed as media forms that challenge the communication of ideas in the art-making process.

The BFA in Graphic Design is a four-year, 120 unit, eight-semester degree. The program emphasizes the development of both practical and conceptual abilities, as necessary preparation for the constantly expanding role of the designer. Garland Kirkpatrick, professor and past program director, explains: "At CalArts, [we] teach theory, history, and formal practice. It is the responsibility of educators to prepare people for the changing environments of the economy, but it is more important to train them to be critical thinkers so that they can chart their own course. Our alumni can adapt to the changing environments."<sup>3</sup> In the first year of the undergraduate program, students are exposed to the basic principles and methodology of two-dimensional design. Visualization and communication techniques are taught in manual (drawing), photographic and digital (Macintosh-based) platforms. A required course entitled *Design Issues* introduces students to the theory and practice of Graphic Design.

Second-year studio encourages experimentation and imagination in design processes. Concepts and forms are developed in the hands-on composition of formal elements. Typographic fundamentals and digital production methods are added to the program of study. Meaning and metaphor in the visual representation of ideas are explored. *Mac Specialist Workshops* are offered as electives to address the need for computer skills in new media (for example Lingo programming, After Effects, and Digital Audio). At CalArts,



computer fundamentals are introduced early in the program, and are integrated with studio projects that begin with manual-based processes.

Pragmatic problem solving is combined with an emphasis on invention in the third year curriculum. Students are expected to respond to structured professional assignments with individual creativity. Popular urban culture and its relation to design solutions is a significant focus of inquiry. *Beginning Multimedia* is offered covering issues and techniques surrounding self-publishing and web creation. As described in the course descriptions listed in Appendix B, “the class peruses an exploration of the space where the roles of designer, author, programmer, image maker, and content provider are blurred, merged, or redefined.” Other electives are offered as alternatives to this course, including *Motion Graphics*, *Digital Type Design*, *Information Design*, and *Publication Design*. A historical survey of Graphic Design is taught within the third year of study.

The development of the personal voice is further encouraged in the final year of the BFA program. Studio projects take the form of independent projects proposed by individual students. Solutions to visual problems are expected to express the maturation of a strong, personal approach. Senior students are encouraged to further explore their own particular area of specialty through a variety of electives. Field trips provide the primary means of learning in the *Professional Practice* seminars. Los Angeles area design offices, video production studios, and printing resources are visited. In the final term, fourth year students are introduced to criticism and theory in the field of Graphic Design in *Theory 1*. In preparation for graduation and thus the pursuit of employment, portfolios are prepared and critiqued.

The graduate program in Graphic Design is dedicated to the advanced study of practical applications and theoretical issues. The MFA degree normally takes two years of full-time study to complete. A three-year program is also offered to provisionally accepted candidates. PMFA (Provisional Master of Fine Arts) students spend their first year in the program preparing to continue in the regular two-year sequence. The curriculum is comprised primarily of a series of graduate seminars, which include independent design projects and, in the final year, the completion of a major graduate project. MFA students are required to complete *Historical Survey of Graphic Design* and *Typographics*, a studio-based exploration of contemporary issues in typography. Courses in *Graphic Design Theory* require critical investigations of the relationship between language and vision as proposed within a variety of disciplines. Electives are selected by individual students according to interest and need, and include: *Beginning and Advanced Multimedia*, *Mutant Design: Exhibition as Interface*, *Mac Specialist Workshops*, and others as co-offered to undergraduate students.

Louise Sandhaus, Co-Director of Graphic Design at CalArts, defines the MFA program in Graphic Design as Smart AND Sexy.<sup>4</sup> As described in correspondence from Professor Sandhaus, 'Smart' means that students become skilled at analyzing a communications problem (or possibility), and determining appropriate responses through form and media. Graduate students are viewed as critical and innovative thinkers. 'Sexy' refers to seductive expression and innovation—going beyond the established vocabularies to discover the potential for giving form to ideas through innovation. Innovation is seen as enveloping both the application of the media and formal possibility. The relationship between 'Smart' and 'Sexy' is of an integral (as opposed to exclusive) nature.<sup>5</sup>

The MFA program at CalArts aims to cultivate independent thinkers—designers who are inventive, self-motivated, and experimental with form. Project methodology includes research and critical analysis in addition to investigations of form and media. Students are expected to combine making and writing with a sophisticated understanding of how type and images work together. The history of graphic design is approached from a 'contemporary' perspective that seeks to understand cultural contexts in both the past and the present. Alternative avenues for analyzing historical precedent are encouraged, facilitating the application of knowledge gained to current projects. Faculty aim to instill confidence in their students as generalists, rather than specialists. However, students are exposed to a spectrum of possibilities that



inform decisions regarding areas of particular interest.<sup>6</sup> The graduate program seeks to reflect upon and respond to the relationship between advancing technology and visual communication, without compromising the identity of the graphic designer within the process of change.

*Footnotes:*

1. California Institute of the Arts. *CalArts Promotional Bulletin*, 1996-1997, p. 9.
2. *Ibid.*, p. 33.
3. California Institute of the Arts. *What Do We Call It Now? Graphic Design Moves with Technology*, in *CalArts Current*, Volume 10, No. 2, Feb/Mar 1998, p. 4.
4. *In conversation with Louise Sandhaus*, at CalArts, February 1999.
5. *Via e-mail correspondence with Louise Sandhaus*.
6. *Ibid.*



CalArts  
BFA Graphic Design

Year 1		Year 2		Year 3		Year 4	
Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
GD101 A&B Graphic Design I	4	AC201 A&B Graphic Design II	6	AG301 A&B Graphic Design III	6	AC401 A&B Graphic Design IV	6
GD110 Tools for Visualization	2	AG365 Design Issues	2	AG315 A&B Typography I & II	3	Elective Graphic Des. elec. *	2
GO111 A Basic Macintosh	2	AGO20A Photography part 1	1,5	AG310 Image Making	2	Elective Graphic Des. elec. *	2
GO111B Mac Workshops!	1,5	AGO20B Photography part 2	1,5	AC475 Digital Production	2	CS171 A&B Historical Survey of Graphic Design	2
						Elective Graphic Des. elec. **	2
						AG011B Mac Workshops!	1,5

11

Y-connected

### Y semester units

11.5 semester units

"Electives, same as 3rd year, plus  
AC3320 Mutant Design: Exhibition as Interface

- \*\*Second Term Electives
- ACG111B Major Specialist Workshops
- AG275 Digital Type Design
- AC350A&B Graphic Design Workshop
- AGC104&B Multi-Media elective TBA
- Multi-Media elective TBA

notes  
to establish specialist Workshops  
or program elective (Multi-Media course  
recommended if student lacks experience in  
media).

variable number of credits



# CalArts

## MFA Graphic Design

PMFA <sup>1</sup>	Fall	Spring	Year 1		Year 2	
			Fall	Spring	Fall	Spring
AG250 A&B Visual Literacy		5	AG510 A&B Graduate Seminar I		6	AG520 A&B Graduate Seminar II
AG370 Typography <sup>3</sup>		2	AG370 Typographics <sup>3</sup>	2	AG360B Advanced Theory	
CS171 A&B Historical Survey of Graphic Design		2	CS171 A&B Historical Survey of Graphic Design		2	AR900 Graduate Independent Study
Elective Graphic Des elec *		V	Elective Graphic Des elec *	V	Elective Graphic Des elec *	V
						V semester units

<sup>1</sup>PMFA Electives: same as MFA Year 1

<sup>2</sup>Electives: same as MFA Year 1

<sup>3</sup>First Term Electives

AG430A&B Beginning Multi Media  
AC011B Mac Specialist Workshops

AC260 Motion Graphics  
AC227 Digital Type Design

AC350A&B Graphic Design Workshop  
AC440 Information Design

AC320 Mutual Design Exhibition as Interface  
Multi Media Elective 1BA

<sup>4</sup>Second Term Electives

AG430A&B Beginning Multi-Media (ONLY IN TERM 1)  
AC011B Mac Specialist Workshops

AC227S Digital Type Design

AC350A&B Graphic Design Workshop  
AC440 Information Design

AC410A&B Public Action Design  
Multi Media Elective 1BA

### Footnotes

1. MFA Provisional Master of Fine Arts

2. May be waived with permission

3. 1 - At least one program elective

4. Beginning Multi Media recommended if lacking experience with new media

N/A=NP

V Variable number of credits

For a complete listing of course descriptions see  
Appendix B



## CARNEGIE MELLON UNIVERSITY

Carnegie Mellon University is located in the city of Pittsburgh, Pennsylvania. The internationally distinguished university offers its students a diverse conglomeration of intellectual resources: from computer sciences to fine arts to engineering to the social sciences. The School of Design, officially part of the College of Fine Arts, offers Bachelor of Fine Art degrees in Communication Design (formerly Graphic Design), and Industrial Design; and Master of Design programs in Interaction Design and Communication Planning and Design. As stated in department promotional materials, the undergraduate design programs provide "an education for the mind, the eye, and the hand."<sup>1</sup> In addition to learning basic design skills, students gain an understanding of the reasoning and principles that guide design processes. The university setting fosters a broad-based, interdisciplinary approach to design education. Students gain valuable practical experience through their involvement in cross-disciplinary teams and corporate-sponsored projects.

The School of Design's philosophy is realized in the following curriculum themes: Design as it affects human experience; computers, new media, and advanced technology; essential perceptual and technical skills, intellectual curiosity, an understanding of the design process, interpersonal skills and small group dynamics, and real-life problem-solving.<sup>2</sup> At CMU, Communication Design is defined as "the art of conveying information, identity, emotions, and values to specific audiences."<sup>3</sup> Throughout the undergraduate program, students complete a variety of projects: identity packages, magazine spreads, web site development, packaging, exhibition design, and computer interfaces. Students learn from graphic design tradition and incorporate current technology, building on the rich history of print design while actively exploring the potential of new media for effective visual communication.<sup>4</sup>

The BFA in Communication Design is a four-year program, with 60% of coursework completed in the School of Design, and 40% throughout the university. The first year of the program is a shared foundation year with Industrial Design. The introductory theme is one of discovery. Students learn basic design skills through the exploration of materials and techniques. During the first year, undergraduates are introduced to various design disciplines, and by the second year, have chosen to focus on either Communication Design or Industrial Design. During the second and third years, students concentrate on their majors through the completion of core design courses. Concurrently, students are expected to develop a solid liberal arts foundation to complement their design studies. General education electives are viewed as "critical to the practice of design, and to the understanding of design's role in social and cultural contexts."<sup>5</sup> During the final year, students are engaged in collaborative research and team projects. Design studios at the senior level focus on the refinement of design skills and preparation for the transition from student to professional. An integrative approach continues in advanced studies of design and related disciplines. Undergraduate students have the option of selecting a minor area of study in another department at the university. Minors commonly selected include Architecture, Art, Engineering, Industrial Management and Professional Writing.

The School of Design at Carnegie Mellon aims to cultivate well-rounded designers who enter the workplace with professional skills and a humanistic outlook.<sup>6</sup> Communication Design graduates are hired by corporate design firms and cultural institutions. Many work as industry consultants, and some eventually start up their own businesses. CMU alumni work in a range of areas of design specialization, including electronic communications, book and editorial design, business identity systems, interface design, environmental signage, packaging, teaching toys, and information diagramming.

Carnegie Mellon University offers two graduate programs in Design: the Master of Design in Interaction Design, and Master of Design in Communication Planning and Design. Each program normally takes two years to complete. Students in the MDes Interaction Design program, which originated in 1994, study Human-computer Interface Design and Human-machine Interaction Design. Dan Boyarski,



Director of Graduate Studies at the School of Design, describes the goals of the Interaction Design program in the following statement:

The program is for students who want to expand the creative potential of the relationship between words, images, sound, motion, time, and space in the context of interactive integrated media. It focuses on human-computer communication, kinetic information display, new narratives, wayfinding through new data spaces, and a collaborative design process. We try to provide a balanced integration of theory, practice, and production, with ample opportunity for solo as well as teamwork, and on self-directed as well as externally sponsored projects.

The Human-Computer Interface (HCI) development model is, first and foremost, human-centered, and is characterized by a multidisciplinary and cooperative, team-based methodology. HCI design is concerned with the understanding of human factors that embrace the fields of psychology, sociology, and anthropology. Instead of focussing on technology as the primary force in design innovation, the Interaction Design program emphasizes the human component of the human-computer equation. Interdisciplinary approaches are encouraged in the conducting of research in areas such as cognition, verbal modes of communication, behavioral observation, and methods for evaluation. The involvement of disciplines outside of design is viewed as integral to the design process—from conception and planning to final execution. The importance of the HCI development model is explained as follows: “Not only is this the model of human-computer interface design, but for the entire scope of product development and human-machine interaction... in short. Interaction Design.”<sup>8</sup>

The MDes program in Interaction Design combines theoretical knowledge gained through seminars with practical applications in the design studio. The intellectual foundation of the first year is expanded by the completion of courses offered by other departments and colleges (such as computer science, psychology, and information management). Students investigate issues affecting the design of small-scale mobile computing devices, and are often involved in corporate-sponsored projects. In the second year, individual exploration leads to the development of a thesis topic that results in a written document and a studio-based project. Some examples of recent topics are: ubiquitous computing, “out of the box” solutions, and web-based commerce. New areas of investigation, such as effective human-computer communication, visualization and navigation through information spaces, time-based information design, and collaborative design strategies among other disciplines and across distances<sup>9</sup> are facilitated amidst CMU’s traditional areas of focus.

The MA degree in Communication Planning and Design aims to bring together the historically distinct occupations of writers and designers. As technologically advanced communication environments blur traditional boundaries between creation and production, effective communication requires writers and designers to become increasingly responsible for both the verbal and the visual.<sup>10</sup> Individual roles are therefore expanded, and collaborative efforts multiplied. Various disciplines are consulted at all stages of the design process—from initial ideation to the delivery of effective communication. At CMU, Communication Planning and Design has been developed as a new field in response to new forms of communication that integrate type and image with the dimensions of motion and sound. With the emergence of the Internet and web-based information arise new challenges in relaying complex data to increasingly diverse audiences. Traditional and innovative media technology forms provide a broad spectrum for research and exploration—from print to video, and photography to interactive media.<sup>11</sup> Recent areas of student exploration include: new narrative structures in hypermedia, visual voice and identity on the web, and strategic thinking for Internet commerce.

In the first year of the MA Communication Planning and Design program, core seminars involve the study of rhetoric and expose students to a variety of approaches to traditional and non-traditional media in communication design. Projects combining aptitudes in verbal and visual communication require critical analysis of concepts and the creative application of techniques and tools. Masters candidates study



the role of narrative and argument in shaping information design, and discover opportunities and challenges in information visualization and navigation created by new technologies. The program attracts both writers and designers, requiring those with backgrounds in writing to take courses in introductory design, and those with design experience to complete classes in writing and rhetoric. Students pursue non-design studies to broaden their knowledge base and cater to specific interests and needs. Opportunities are available to become involved in design projects for nonprofit organizations and those sponsored by local businesses and campus research centers. As in the Interaction Design program, second-year graduate students develop and complete a written document and studio thesis project. At Carnegie Mellon, the goal of the graduate programs in design is to prepare students for advanced levels of professional employment in communication as planners and designers in areas of traditional and print media, as well as the growing fields of design planning, kinetic media, interactive multimedia, internet communication, and interaction design.<sup>12</sup>

*Footnotes:*

1. Carnegie Mellon University. *School of Design Information Booklet*.  
2-12. Ibid.



# CMU BFA Communication Design

Year 1		Year 2		Year 3		Year 4	
Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
Studio Experience	<b>51-101</b> Design Studio I	<b>51-102</b> Design Studio II	<b>51-201</b> Basic Typography	<b>51-202</b> Adv Typography	<b>51-301</b> Adv Typography	<b>51-302</b> Information Design	<b>51-401</b> Team & Ind Projects
Ideas & Methods in Design Practice	<b>51-121</b> Design Drawing I	<b>51-122</b> Design Drawing II	<b>Elective</b> Dept. Elective*	<b>Elective</b> Dept. Elective**	<b>Elective</b> Dept. Elective*	<b>Elective</b> Dept. Elective*	<b>51-402</b> Team & Ind Projects
Design Studies History, Theory, & Criticism	<b>51-131</b> Computer Skills	<b>51-132</b> Photography in Des	<b>Elective</b> Dept. Elective*	<b>Elective</b> Dept. Elective**	<b>Elective</b> Dept. Elective*	<b>Elective</b> Dept. Elective*	<b>51-471</b> Professional Practice
	<b>51-171</b> Human Exp. in Des	<b>51-172</b> Intro Des Thinking	<b>51-271</b> Design History I	<b>51-272</b> Design History II	<b>51-371</b> Design Studies	<b>51-372</b> Contemporary Des.	<b>51-472</b> Design Studies
					<b>51-373</b> Language in Design		
					<b>Elective</b> General Education	<b>Elective</b> General Education	
					<b>Elective</b> General Education	<b>Elective</b> General Education	
					<b>85-102</b> Intro Psychology	<b>Elective</b> General Education	
					<b>79-104</b> World History	<b>Elective</b> General Education	
					<b>76-122</b> English Composition	<b>Elective</b> General Education	
						<b>93</b> semester units	
							<b>V</b> semester units

## \*First Term Department Electives

51-221 Communication Design Darkroom I  
51-223 Computer Basics  
51-225 Communication Design Darkroom II  
51-231 Introduction to Calligraphy I  
51-331 Advanced Calligraphy I  
51-261 Communication Design Fundamentals

## \*Second Term Department Electives

51-222 Colour & Communication  
51-228 Introduction to Calligraphy II  
51-325 Signs, Symbols, & Marks  
51-321 Photography & Communication  
51-327 Moving Images & Meaning  
51-401/402 E Packaging & New Product Dev

## \*First Term Department Electives

51-322 Drawing & Communication  
51-325 Signs, Symbols, & Marks  
51-321 Photography & Communication  
51-327 Moving Images & Meaning  
51-401/402 E Packaging & New Product Dev

## \*First Term Department Electives

51-421 Interaction & Visual Interface  
Time, Motion, & Communication  
51-423 Introduction to Computing in Design  
Letterpress I

## \*Second Term Department Electives

Letterpress II

## \*Second Term Department Electives

Digital Pre-Press Production  
51-326 Documenting the Visual (English)  
51-324 Prototyping for Communication Design

\*Courses in bold are recommended

\*Courses in bold are recommended

**Foundations**  
1 e 9 Kinetic Information Display, Maps, Diagrams, & Graphs: Human-Computer Interaction Design, etc.

Notes  
V Variable number of credits

For a complete listing of course descriptions see  
Appendix C



# CMU

## MDes Interaction Design: Human-Computer Interface Design / Human-Machine Interaction Design

Year 1		Year 2		
	Fall	Spring	Fall	
Seminars	<b>51-701</b> Design Seminar I 12	<b>51-702/4<sup>1</sup></b> Design Seminar II 12	<b>51-801</b> Thesis Seminar I 12	<b>51-802</b> Thesis Seminar II 12
Studies	<b>51-711</b> Design Studio I 12	<b>51-712/402<sup>1</sup></b> Design Studio II 12	<b>51-811</b> Thesis Project I 12	<b>51-812</b> Thesis Project II 12
Ideas & Methods Courses	<b>51-745</b> Vis Interface Design 12	<b>51-742</b> On-line Information Des. + other depts. <sup>2</sup>	<b>Elective</b> 12	<b>Elective</b> 12
			<b>Elective</b> 12	<b>Elective</b> 12
	<b>51-741</b> Computing in Des 12	<b>Elective</b> 12	<b>Elective</b> 12	<b>Elective</b> 12
				V <small>semester units</small>
				V <small>semester units</small>

### Footnotes

1 51-702 (Human-Machine Interaction Design program) or 51-704 (Human-Computer Interface Design program)

2 Elective courses may be taken in the Design Dept. or other depts. & schools in order to complete an individualized program of study

### Notes

V Variable number of credits

For a complete listing of course descriptions see  
Appendix C



# CMU

## MA Communication Planning & Design

(offered jointly by the Departments of Design & English)

Year 1		Year 2	
Fall	Spring	Fall	Spring
Seminars	51-701 Design Seminar I 12	51-702 Design Seminar II 12	51-801 Thesis Seminar I 12
			51-802 Thesis Seminar II 12
Studies	51-711 Design Studio I 12	51-712 Design Studio II 12	51-811 Thesis Project I 12
			51-812 Thesis Project II 12
Ideas & Methods Courses	Elective Des. + other depts. 1 V	Elective Des. + other depts. 1 V	Elective Des. + other depts. 1 V
			Elective Des. + other depts. 1 V

—————  
V semester units  
—————  
V semester units

### Footnotes

1 Elective courses may be taken in the Design Dept, the English Dept., or other depts. & schools in order to complete an individualized program of study

### Notes

V Variable number of credits

V Variable number of credits  
For a complete listing of course descriptions see Appendix C



## SCHOOL OF VISUAL ARTS

The School of Visual Arts lies in the heart of New York City. SVA recently celebrated its 50<sup>th</sup> anniversary. The school was originally founded by Silas Rhodes and Burne Hogarth as the Cartoonists and Illustrators School in 1947. The name was changed to the School of Visual Arts in the mid-50s, and has since grown to become the largest independent undergraduate art college in the United States. Today, SVA offers Bachelor of Fine Arts programs in Advertising and Graphic Design, Art Education, Computer Art; Film, Video and Animation; Fine Arts, Illustration and Cartooning, Interior Design, and Photography. In 1983, SVA offered its first graduate level program—a Master of Fine Arts in Painting, Drawing, and Sculpture. Since then, MFA programs in Computer Art, Illustration, Photography, and most recently, Design, have been added. SVA's student body is composed of approximately 2,300 full-time undergraduate students, 300 graduate candidates, and more than 4,000 continuing education students.

The underlying philosophy of the School is summarized in the following statement: "The School of Visual Arts educates its students through a unique creative process, enabling the students to develop a personal style, form, and voice—a genuine advantage in a growing industry."<sup>1</sup> The commercial industries, cultural richness, and unmatched art and design community of New York City provide incredible resources for the study of visual communications. SVA faculty members are renowned for their outstanding contributions in art direction and design. The School aims to maintain a balance between theory and practice by hiring working artists and designers only, thereby providing students with the expertise and currency of successful professionals. Faculty members are granted a great degree of freedom in the classroom, and are encouraged to share their own experiences, to experiment with teaching methodology, and foster diversity and innovation through course content. SVA graduates have a reputation for successful placement in leading advertising and design agencies, art studios, magazines and corporations.

The BFA degrees in Advertising and Graphic Design require four years of full-time study. All BFA programs at SVA are comprised of a total of 128 credit hours, broken down as follows: 70 Studio credits, 32 Humanities and Sciences credits, 12 Art History credits, and 14 credits in either Studio, Humanities and Sciences, Art History, or special courses. Freshman Advertising and Graphic Design majors share the same foundation and second year courses. In the first year, the following introductory classes are required: *Survey of World Art, Painting and Color, Drawing, Sculpture, Media Communications, Literature and Writing, and Basic Photography*. Students must successfully complete all courses, demonstrating proficiency and understanding in a variety of fine art media, historical studies, and writing and critical thinking. In the second year, students begin to develop more specific skills in the area of Graphic Design and Advertising, completing introductory courses in each discipline, full-year classes in *Basic Typographic Design and Drawing*, and one semester of *Visual Literacy*, an experimental workshop which deals with current issues in visual communication. *Computers in the Studio*, a two-semester introduction to the Macintosh desktop publishing system, and classes devoted to the topics of *Originality* and *Textile Design* are also required.

At the third-year level, undergraduates choose to major in either Advertising or Graphic Design. The remaining two years are devoted to study in the area of specialization, although there is some overlap between courses. (See the curriculum charts that follow and course descriptions as listed in the appendix for further information). In the third year, students must take either *Advanced Advertising* or *Communication/Graphic Design*. The remainder of credit requirements are completed from an extensive list of possible courses, allowing students to cater programs to their own specific interests. In Advertising, the emphasis is on print media, advertising campaigns, and creative concept development. Options include courses dealing with design process, advertising and art direction, digital production tools and techniques, mixed media imagery, toys and games, three-dimensional design and illustration, drawing, copywriting, and advanced software applications (QuarkXpress and PhotoShop). The required third-year Graphic Design course exposes students to various methods of working through communication problems—from rough preliminary exploration to finished comps. Four of the option courses—*Editorial Design, Designing*



with *Typography*, *Typography and Design*, and *Graphic Design Studio*—are available to Advertising majors as well. The remainder of department courses available to Graphic Design students cover topics such as conceptual design, process and methodology, production tools and techniques in the digital realm, communication concepts, experimental book art, graphic communication for television, print and package design, corporate identity, three-dimensional design and illustration, advanced Quark and PhotoShop, and professional practice.

The senior year is constructed much like the third, with one required course, and the remainder of course credits selected by individual students. At this time, there is a major emphasis on the construction and presentation of personalized portfolio packages. Advertising and Graphic Design majors complete a six-credit hour portfolio course. Fourth-year Graphic Design majors choose from a selection of three available required classes: *Graphic Design Portfolio*, *Three-dimensional Portfolio*, or *A Portfolio Alternative: Books and Related Material*. The focus of portfolio courses is on the production of highly finished comps and samples. In addition to an increased number of options in the non-major area of study, students in either stream may complete historical survey courses in Advertising or Graphic Design. Throughout the four years of the BFA program, undergraduates must also fulfill credit requirements in the areas of Studio, Humanities, Sciences, and Art History.

The Master of Fine Arts Design program began in the fall of 1998. The first set of degree recipients will graduate in April 2000. The new multi-disciplinary graduate program promotes the idea of the designer as author and producer. Steven Heller, program chair, explains: "The focus of this program is authorship in the broadest sense—the designer is not merely a form-giver but a content creator in a variety of media."<sup>2</sup> The purpose of the program is to educate and train designers to do more than just execute the ideas of others through service-oriented work. The role of graphic designer expands to include more creative involvement with the end product. Heller notes a market demand for authors who are not merely problem solvers, but conceptualizers who are intimately involved with a total product or idea.<sup>3</sup> The program is not restricted to traditional graphic design curriculum, and aims to develop creative concept development skills and talents in the creation of imaginative and marketable products. The new MFA program embodies visual communications as the foundation for all creative activity.

The MFA Design degree is a two-year graduate program. In the first year, the focus is on introducing entrepreneurial themes and teaching advanced authoring skills. Subjects covered include writing and editing, criticism, typography as visual language, film and new media directing, visual journalism, and book and magazine publishing. Additionally, faculty teach complementary classes in marketing, research, advertising, promotion, publicity, intellectual property and networking.<sup>4</sup> (Refer to course descriptions listed in the appendix for further information). Also, students have the option of completing or auditing elective courses offered by other departments.

During the second year of the program, students complete one core course each semester—*The Integrated Studio*—where the emphasis is on production-oriented skills. Students conceptualize, design, construct, and 'market' viable products—products that range from books to films, CD-ROMS to Web sites, newspapers and magazines to toys. Projects may be developed individually or in student teams. Ideas become proposals for specific markets, and are then presented to a panel of NYC industry guests who determine whether the concept has enough merit to be developed further. Next, prototypes are created for distribution to potential supporters such as distributors, publishers and producers. The final presentation of the prototype must meet professional production standards. The core course is supplemented by a series of seminars intended to bring students into close and regular contact with professional industry. Seminar topics will change from year to year in order to meet student needs and interests.

The new Master of Fine Arts program in Design is taught by a number of distinguished professionals in visual communications and related fields. In the final year of study, students maintain close contact with one faculty member who is assigned as their thesis advisor. The program also shares some teaching staff



with the undergraduate department in Advertising and Graphic Design. MFA Design candidates come from diverse visual art backgrounds, including fine art, film, photography, computer studies, graphic design, and other design disciplines. The common thread is authorial aspiration. As new media evolves and continues to transform the role of the graphic designer, the graduate program ensures that alumni will be equipped with specialized skills in entrepreneurial approaches to design innovation.

*Footnotes*

1. Halm, Daniel. *SVA Helps Art Students Develop, Nurture Personal Styles* in Town and Village, New York, NY; August 27, 1998.
2. School of Visual Arts. *SVA Promotional Postcard*, 1998.
3. Halm, 1998.
4. School of Visual Arts. *Master of Fine Arts: Degree Programs*, New York, NY, 1999-2000, p. 24.







# SVA

## BFA Advertising

Year 1		Year 2		Year 3		Year 4	
Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
FPD1020 Painting & Colour (drawing)	8	GDD2020 Basic Graphic Design	4	ADD3010 Advanced Advertising	6	ADD4010 Advertising Portfolio	8
FDD1030	6	ADD2030 Basic Advertising or CDD2163/2177/2178	4	Elective Advertising or Graphic Design elective*	4	Elective Advertising or Graphic Design elective**	4
GDD1010 Media Communications	6	GDD2050 Basic Typographic Design	4	Elective Advertising or Graphic Design elective*	4	Elective Advertising or Graphic Design elective**	4
FSD1050 Sculpture	3	PHD1010 Basic Photography	2	GDD2070 Visual Literacy	3	Elective Advertising or Graphic Design elective*	4
AHD1010 Survey of World Art	4	HCD1020 Literature & Writing I	3	GDD2090 Computers in the Studio	4	Elective Advertising or Graphic Design elective*	4
HCD1010 Literature & Writing II	3					Elective Adv or GD elective*	4



# SVA

## MFA Design (Sample Program)

Year 1	Year 2	
Fall	Fall	Spring
The Author's Workshop   3	1,000 Words   3	DSG 6010   2 The Integrated Studio
DSG 5070   6 Crossing Disciplines   Apart/Design Media	DSG 6090   6 Seminars	
DSG 5130   3 The Visual Book	DSG 6030   3 History for Sale: Research & Product	DSG 6050   6 Filling the Screen: The Theory & Practice of Interactivity
Filling the Screen: The Theory & Practice of Interactivity   6		DSG 6070   6 Thesis (Preparation)
102%: The Designer as Entrepreneur   6		
DSG 5080   0 Paul Rand Lectures	DSG 5020   3 Books: Idea to Package	
		V credit hours
		60 total credits

V

credit hours

60 total credits

### Additional First Year Courses

- DSC 5050 The Magazine Workshop
- DSC 5060 Design for Television: Graphic Design Using Time, Motion & Sound
- DSC 5190 The Internal Museum
- DSC 5120A Design for Music
- DSC 5040A Visual Languages: Personality for Institutions, Corporations, and All Other Establishments



## ILLINOIS INSTITUTE OF TECHNOLOGY

Illinois Institute of Technology is a private teaching and research institute located in Chicago. IIT was established in 1890, and offers programs in engineering, science, psychology, business, law, architecture, and design. The Institute has a long-standing reputation for providing students with innovative curricula in advanced education. IIT has a student population of 7,000 that includes scholars from approximately 70 foreign countries. The IIT Research Institute is supported by an annual budget of over \$130 million in U.S. funds.

Laszlo Moholy-Nagy founded the Institute of Design (ID) in 1937 as the New Bauhaus. Seven years later, in 1944, the school was renamed the Institute of Design, merging with Illinois Institute of Technology in 1949. Since its inception, ID has embodied a future-directed vision driven by new technology and experimentation. The Institute of Design's philosophy is primarily inspired by the notion of change, as expressed in the opening statement of the school's information booklet:

Change confronts us in virtually every aspect of life. In technology, products and services, markets, and the very organization of business, the relentless pace of change demands new ideas and approaches. At the same time, new patterns of economic, social, and political interactions broaden the consequences of nearly every decision. /Design too, is changing. The essential nature of design has always been to anticipate and specify the forms and systems of the future. As a discipline, it is specifically concerned with change. And design itself is at the threshold of a fundamental transformation that is simultaneously exciting and intimidating. /At the Institute of Design, we are at the vanguard of this transformation, developing the concepts and methods that are redefining the profession and broadening the role of designers.<sup>1</sup>

The Institute of Design offers graduate programs exclusively, including North America's first (and, until recently, only) Doctor of Philosophy degree in Design. The professional Master of Design program allows students to select one of three specializations: human-centered communication or product design, design planning, or photography. The Master of Science in Design was developed to provide a separate design research degree in addition to the professional MDes program. The MS degree also serves as a one-year, 32 credit hour pre-PhD route for students without an undergraduate degree in a design discipline. It normally takes two years to complete the 64 credit hour MDes in communication design. The PhD program is comprised of 116 credit hours, requires a minimum of three years of study, and is intended for those who wish to conduct original research and/or teach at advanced university levels.

The uniqueness of the Institute of Design's approach to design education is described in the following quote: "ID's program is markedly different from other graduate design programs because of its insistence on user-centeredness, its development of rigorous, verifiable methods and its emphasis on placing design at the center of the development process."<sup>2</sup> The design programs acknowledge the need for intense research experience and further professional educational at graduate levels. The purpose of the Institute of Design is to foster invention and innovation. Three primary strategies to achieve this are: the creation of more powerful design professionals, the expansion of design knowledge through research, and the transformation of how design is used by senior management.<sup>3</sup>

The Institute of Design aims to graduate a more powerful design professional through its programs in Human-centered Design, Design Planning, and Photography. Human-centered design, which encompasses both communication design and industrial design, studies those factors that influence the interactions between people and the designed environment—as composed of messages, products, services, and systems. The human factors studied include physical, cognitive, social and cultural elements. Students depend on research techniques such as objective observation, behavioral analysis, and prototyping to develop inventive design concepts and solutions that better respond to user needs.



Design planning is defined as “a new field that enables designers to move beyond creating individual artifacts and function at a strategic level in any organization.”<sup>4</sup> MDes students choosing this route learn methods of identifying new messages, products, and services, and strategic methods for their systematic implementation. The goal is to transform organizations by combining research techniques from business, ethnography, and the social sciences with creative design processes. Ultimately, the users of a company’s products or services are offered increased value, which in turn reduces the impact of competitors on market share. Professor Charles Owen invented structured planning, a design method that uses computer-supported tools for finding, structuring, using, and communicating the information necessary for inventive solutions.<sup>5</sup> This design process is utilized and extended by student teams at the Institute of Design to help in the devising of solutions to complex problems.

At the Institute of Design, photography is viewed as a form of visual communication design that is best used as a medium for social inquiry, as opposed to aesthetic applications in commercial industries. Technological advancement in areas such as image processing, Web publication, and interactive image creation now allows for a more cohesive and complex approach which adds research, criticism, writing, and diagramming to imaging techniques. The changing nature of photography is studied amidst developments in new media and human-centered possibilities in the form of social documentation.

At ID, the expansion of design knowledge is a critical means of achieving innovation and invention in design. Research is the intellectual core of all work at the Institute of Design.<sup>6</sup> Faculty members are actively involved in design and design-related research activities in the areas of anthropology, cognitive psychology, computer science, the history of technology, information design, interactive diagramming, photography, product design, and semantics of form. Graduate degree candidates come from a multitude of educational disciplines and professional backgrounds, including those outside of design. Students are submersed in an active multi-disciplinary research community, drawing upon a variety of perspectives to “observe and analyze real-world environments as a means of designing information, images, products, and services that shape and are shaped by how people live.”<sup>7</sup>

A third means of fostering invention and innovation at the Institute of Design is through the transformation of how design is used by senior management. This is achieved through the Executive Program and by creating corporate opportunities for students. The goal of the Executive Program is to directly transfer the Institute’s design methods to business. The program is executed in two formats: the first involves the tailoring of a system to the needs of a specific company, and the second creates a program for groups of companies that share a common interest.<sup>8</sup> The aim is to improve regular development cycles, increase market share, and instill systems for long-term competitive advantage. Business personnel taking advantage of the Executive Program to learn advanced methodology engage in interactive workshops and investigate case studies. The transfer of knowledge and creative processes to senior management is realized through a number of programs that connect ID students and alumni directly to Chicago businesses. These programs include: sponsorship of ongoing and major projects by interested companies and organizations, investment in a graduate student’s work via fellowship contributions, the involvement of corporate associates in flexible continuing education opportunities, and internships, which often lead to full-time work following graduation.

Social and technological changes provide the impetus for the integration of new tools and methodology in the design process. As a result of experiencing such advanced theoretical applications in design development, students later emerge as leaders in increasingly complex design industries.



*Footnotes*

1. Illinois Institute of Technology. *Institute of Design Information Booklet*, Chicago, 1998-1999, p. 1.
2. Illinois Institute of Technology. *IIT Graduate Bulletin*, 1998-2000, p. 1.
3. Ibid, p. 2-3.
4. Illinois Institute of Technology. *Institute of Design Information Booklet*, Chicago, 1998-1999, p. 18.
5. Ibid, p. 20.
6. Ibid, p. 26.
7. Illinois Institute of Technology. *IIT Graduate Bulletin*, 1998-2000, p. 1.
8. Illinois Institute of Technology. *Institute of Design Information Booklet*, Chicago, 1998-1999, p. 28.



**Year 1**  
 Fall Spring

<b>ID 500</b> Value <sup>1</sup>	1 <sup>5</sup>	<b>Specialty<sup>3</sup></b> ID 520-576*	<b>Specialty<sup>3</sup></b> ID 520-576*	<b>Specialty Courses<sup>3</sup></b> (select from) ID 520-576*	<b>Specialty<sup>3</sup></b> ID 520-576*	<b>Elective</b> 400+ level <sup>4</sup>										

**32 credit hours****32 credit hours***footnotes*

- 1 One of several courses that occur during a half-semester only (see appendix A for details)
- 2 Or 11.581 (Thesis/Project Workshop)
- 3 Students select from available workshops & specialty courses to meet the objectives of the student's professional goals (see list\*)
- 4 Electives. Full or half-semester courses selected from university course offerings to complement objectives of the student's program

A Specialty courses: Over the course of the 2 years, total credits must equal 1/2 (sum of the A values = 32). Most courses are 1.5 credits each  
 B Electives: Over the course of the 2 years, total credits must equal 10 (sum of B values = 10)  
 V Variable number of credits

Notes

A Specialty courses: Over the course of the 2 years, total credits must equal 1/2 (sum of the A values = 32). Most courses are 1.5 credits each  
 B Electives: Over the course of the 2 years, total credits must equal 10 (sum of B values = 10)  
 V Variable number of credits

\*Professional Sequence Workshops  
& Specialty Courses  
(plus workshops = 32 credits)  
(ID 220-576)

ID 520 Communication Planning	ID 521 Product Planning	ID 522 Technological Development & Design Innovation
ID 523 Rule-System Description Language	ID 524 Strategic Design Planning	ID 525 Design Planning & Technological Innovation
ID 526 Information Structuring	ID 527 Assessment & Prediction Methods	ID 528 Advanced Design Planning
ID 529 Computer Applications in Design	ID 530 Computer-Supported Design Processes	ID 531 Decision Support Techniques
ID 532 Design Analysis	ID 533 Design Synthesis	ID 534 Design
ID 535 Decision Support Techniques	ID 536 Form-Generation Processes	ID 537 Artificial Intelligence & Design Problem Solving
ID 538 Design-Simulation Programming	ID 539 Data Structures & Cellular Modeling	ID 540 Advanced Communication Design
ID 541 Advanced Product Development	ID 542 Advanced Control Technology	ID 543 Intelligent Products
ID 544 Interface Design	ID 545 Interactive Media	ID 546 Diagram Development
ID 547 Cultural Human Factors	ID 548 Visual Language	ID 549 Behavioral Analysis & Design
ID 550 Cognitive Human Factors	ID 551 Metaphor & Analogy in Design	ID 552 Social Human Factors
ID 553 Social Human Factors	ID 554 History of Photography 1913 to Present	ID 555 Documentary Projects
ID 556 Documentary Methods	ID 557 Dynamic Diagrams	ID 558 The Nature of Documentary Photography
ID 559 Computing & Photography	ID 560 Image Processing Applications	ID 561 Historical Print Edition in Documentary Imagery
ID 562 History of Photography 1912	ID 563 History of Photography 1913 to Present	ID 564 Case Studies of Advanced Design Projects
ID 565 Documentary Projects	ID 566 Special Topics in Documentary Photography	ID 567 Documentary Methods
ID 568 Project Research	ID 569 Metaphor & Analogy	ID 570 Case Studies of Advanced Design Projects
ID 571 Case Study Development	ID 572 Systems & Design	ID 573 Case Studies of Advanced Design Projects
ID 572 Systems & Design	ID 573 Introduction to Design Studies	ID 574 Design History I
ID 573 Introduction to Design Studies	ID 575 Design History II	ID 576 Design Criticism



# MS Design

Year 1  
Fall

Spring

<b>ID 500</b> 1.5 Des Value <sup>1</sup>	<b>ID 510</b> 1.5 Des Research Meth	<b>ID 511</b> 1.5 Des Research Phil	<b>Specialty<sup>2</sup></b> 1.5 ID 520-559/568-576*	<b>ID 509</b> 1.5 Image <sup>1</sup>	<b>Specialty<sup>2</sup></b> 1.5 ID 520-559/568-576*	<b>ID 580</b> 1.5 Design Workshop <sup>1</sup>	<b>Specialty Courses<sup>2</sup></b> (Select from) ID 520-559 & ID 568-576*	<b>ID 590</b> V Research & Thesis	<b>Electives</b> 400+ level <sup>3</sup>
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\*Professional Software Workshops  
3 Variable Variables  
(ID 520-559 & ID 568-576)

ID 520 Communication Planning	ID 521 Product Planning	ID 522 Technological Development & Design Innovation	ID 523 Rule-System Description Language	ID 524 Strategic Design Planning	ID 525 Design Planning & Technological Innovation	ID 526 Design Planning & Market Forces	ID 528 Advanced Design Planning	ID 530 Information Structuring	ID 531 Computer Applications in Design	ID 532 Computer-Supported Design Processes	ID 533 Design Analysis	ID 534 Design Synthesis	ID 535 Decision Support Techniques	ID 536 Team-Generation Processes	ID 537 Artificial Intelligence & Design Problem Solving	ID 538 Design Simulation Programming	ID 539 Data Structures & Cellular Modelling	ID 540 Advanced Communication Design	ID 541 Advanced Product Development	ID 542 Advanced Control Technology	ID 543 Intelligent Products	ID 544 Interface Design	ID 545 Interactive Media	ID 546 Diagram Development	ID 550 Behavioral Analysis & Design	ID 551 Cognitive Human Factors	ID 552 Social Human Factors	ID 553 Cultural Human Factors	ID 554 Visual Language	ID 555 Metaphor & Analogy in Design	ID 556 Meaning & Form	ID 557 Dynamic Diagrams	ID 558 Theories of Information & Communication	ID 568 Project Research	ID 570 Case Studies of Advanced Design Projects	ID 571 Case Study Development	ID 572 Systems & Systems Theory in Design	ID 573 Introduction to Design Studies	ID 574 Design History I	ID 575 Design History II	ID 576 Design Criticism
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*Footnotes*

1. One of several courses that occur during a half-semester only (see [appendix A for details](#))
2. Students select from available workshops & specialty courses to meet the objectives of the student's professional goals (see [list](#))
3. Electives (full or half-semester) courses selected from university course offerings to complement objectives of the student's program. Over the course of the year, total credits must equal 9

*Notes*

A. Specialty courses. Over the course of the year, total credits must equal 8 (sum of A values = 8)

Most courses are 1.5 credits each  
V Variable number of credits

For a complete listing of course descriptions see [Appendix F](#)



<p><b>30 credit hours</b></p> <p><i>prerequisites</i> Designated by the dept may substitute for up to 3 hours of elective or research sequence credit</p> <p>Specially courses are courses in special branches of design theory, process or practice, are normally selected from half-semester courses (see list*)</p>	<p><b>30 credit hours</b></p> <p><b>30 credit hours</b></p>	<p><b>32 credit hours</b></p> <p><b>116 total credits<sup>4</sup></b></p>	<p><b>32 credit hours</b></p>
<p><b>30 credit hours</b></p> <p><i>notes</i> Summer research on projects</p>	<p><b>30 credit hours</b></p>	<p><b>32 credit hours</b></p>	<p><b>32 credit hours</b></p>
<p><b>30 credit hours</b></p> <p><i>notes</i> Summer research on projects</p>	<p><b>30 credit hours</b></p>	<p><b>32 credit hours</b></p>	<p><b>32 credit hours</b></p>
<p><i>notes</i> Summer research on projects</p>	<p><b>30 credit hours</b></p>	<p><b>32 credit hours</b></p>	<p><b>32 credit hours</b></p>

notes

Note: Summer research on projects designated by the dept may substitute for up to 3 hours of elective or research sequence credit

- Specialty courses are courses in special branches of design theory process or practice

are normally selected from half-semester courses (see list\*)

Electives include full or half-semester courses selected from the university's course offerings to complement objectives of the student's program.

With 32 hours MS program or equivalent  
design Master's degree

Program is a minimum of 3 years

Specialty courses. Over the course of the program, total credits must equal 21

**Electives:** Over the course of the program the sum of the A values is 21. Most courses are 5 credits.

The dissertation is a total of 48 credit hours and credits must equal 12 (i.e.  $B + B = 12$ )

the sum of the values is 48). Variable number of credits

*For a complete listing of course descriptions see Appendix E.*



## CHAPTER 3

## FACULTY QUESTIONNAIRE

## Respondents

1) **Jorge Frascara, Professor and Visual Communication Design Coordinator**  
*FGDC, BFA/BEEd, Post Dip., National School of Fine Arts, Argentina*

**University of Alberta**

*Department of Art and Design*  
*Program: Visual Communication Design*  
 Degrees offered: BDes, MDes

Jorge Frascara is a Fellow of the Society of Graphic Designers of Canada. He is a past president of ICOGRADA (1985-1987) and has contributed to work on graphic symbols for public information for both the ISO and the Canadian Standards Council. He is a member of the editorial advisory boards of *Information Design Journal* (England), *Design Issues* (Chicago) and *Tipografica* (Buenos Aires). He is also a member of the advisory board, Department of Design, Carnegie Mellon University. He is the author of *User-Centred Graphic Design: Mass Communications and Social Change, The Power of Images* (English and Spanish versions), *Diseno Grafico y Comunicacion* (Infinito, Argentina) and the editor of *Graphic Design, World Views* (Kodansha, Japan). He has published many articles on design and art and design education, has lectured and made presentations in more than twenty countries and has juried several major international design exhibitions. He has conceived and organized major conferences on issues pertaining to design education: *Edmonton '95: Charting the Future of Graphic Design Education, XVII Icograda Congress/Education Section* (Punta del Este, 1997) and most recently, *Design and the Social Sciences: Making Connections*. He was program co-chairman of the Icograda-UNESCO *Graphic Design for Development Conference* (Nairobi, 1987). His professional practice concentrates on visual communications as related to traffic safety.

2) **Louise Sandhaus, Professor and Graphic Design Co-Chair**

*MFA, California Institute of the Arts; Post-Graduate Laureate, Jan van Eyck Akadamie, The Netherlands*

**California Institute of the Arts**

*School of Art*  
*Program: Graphic Design*  
 Degrees offered: BFA, MFA

Louise Sandhaus is a graphic designer working in both print and digital media. Together with Michael Worthington, she chairs the Graphic Design program. Outside of her teaching at CalArts, she maintains a design consultancy specializing in interface, information, and software design, and produces events, exhibitions, and publications concerning graphic design and new technologies. Recently she co-organized *Bit x Bit: Rebuilding Design Education in the Digital Context*, one day of a three-day event on design education sponsored by the School of Visual Arts, New York. She also curated the exhibition *Designer as Educator*, demonstrating ways in which graphic design is furthering the field of new media. At SIGGRAPH 1997, she participated on the panel *The Difference Between Here and There: What Graphic Design Brings to Electronic Space* and chaired the panel, *Retooling: Implements for Creativity*. She also edited an AIGA Journal issue entitled *Mutant Design: ...yes, but is it GRAPHIC design?*



3) Charlee Brodsky, Associate Professor and Chair of the Communication Design Program  
*BA, Sarah Lawrence College; MFA, Yale University*

**Carnegie Mellon University**

*School of Design*

*Undergraduate programs: Communication Design*

*Graduate programs: Interaction Design, Communication Planning and Design*

Degrees offered: BFA; MDes, MA

Charlee Brodsky teaches photo-design and photography. One of her specializations is documentary photography, for which she has received two prestigious Individual Fellowships from the Pennsylvania Council on the Arts. She exhibits nationally. In addition, she has curated numerous photography exhibitions at the Carnegie Museum of Art dealing with the history of photography in Western Pennsylvania.

4) Steven Heller, Professor and Chair of the MFA Design Department

*Education: New York University*

**School of Visual Arts**

*Undergraduate programs: Advertising and Graphic Design*

*Graduate program: Design*

Degrees offered: BFA, MFA

Steven Heller is a senior art director at *The New York Times*, special selections; and art director of *The New York Times Book Review*. He is editor of the *AIGA Journal of Graphic Design* and a contributing editor to *Print* and *ID* magazines. Professor Heller has authored, co-authored, or edited numerous books, including *The Education of a Graphic Designer*; *Design Literacy: Understanding Graphic Design*; *Faces on the Edge: Type in the Digital Age*; *Italian Art Deco: Graphic Design Between the Wars*; *Graphic Style: From Victorian to Postmodern*; *Borrowed Design: The Use and Abuse of Historic Form*; *Graphic Wit: The Art of Humor in Design*; *The Savage Mirror: The Art of Contemporary Caricature*; *The Business of Illustration*; *Magazines Inside and Out*; *Looking Closer Two: Low Budget High Quality Design: The Art of Inexpensive Visual Communication*; *Man Bites Man: Two Decades of Satiric Art*; *Jules Feiffer's America*; *The Art of New York*; *War Heads: Cartoonists for a Nuclear Freeze*; *Art Against War*; *Seymour Chwast: The Left Handed Designer*; *Innovators of American Illustration*; *American Typeplay: That's Entertainment*; *French Modern: Art Deco Graphic Design*; and *Jackets Required: An Illustrated History of American Book Jacket Design*. He has also curated *Simplicissimus, Germany's Most Influential Satire Magazine*, Goethe House; *Political Art, Ten Years of Graphic Commentary*, AIGA; *L'Assiette au Beurre*, The French Institute, NY; *The Art of Satire*, Pratt Graphics Center; and *Typographic Treasures, The Work of W.A. Dwiggins*, ITC Center. Awards and honors include: National Endowment for the Arts; Special Educators Award, New York Art Directors Club.

5) Charles Owen, Distinguished Professor of Design

*BS, Purdue University; MS, Institute of Design, Illinois Institute of Technology*

**Illinois Institute of Technology**

*Institute of Design*

*Masters program: Communication Design, Design tracks: Design Planning, Human-Centered Design*

*Doctor of Philosophy program: Design*

Degrees offered: MDes, MS; PhD

Charles Owen, a pioneer of computer-supported design methods, is an internationally renowned design theorist and methodologist. He is a consultant to industry leaders on product development processes and



structured planning. Throughout his distinguished career as an educator, he has contributed to innovative directions in educational methodology for graduate programs in design. He is the Founder and Director of the Institute of Design's multi-million dollar Design Processes Laboratory. Student teams under his guidance have won numerous design awards, including the Grand Prize twice in the Japan Design Foundation's Biennial International Design Competition, Osaka; the Grand Prize in Sony Corporation's International Design Vision Competition, and the Grand Award in the Environmental Technology category of *Popular Science Magazine's Best of What's New*. He presently serves as advisor to university design programs in the U.S. and abroad, and on the advisory boards of: *Visible Language* (U.S.), *The Journal of Business and Design* (U.S.), *Design Recherche* (France), *Design Studies* (U.K.), *ARCOS* (Brazil), *The Journal of the Japanese Society for the Science of Design*, and the new Wiley International book series on design. Professor Owen has written a number of computer programs for business and institutional applications, has published widely (over 90 articles, papers, books, and book chapters), has served on international juries, and has been an invited lecturer at over 160 institutions worldwide. In 1990, he was the recipient of the American Center for Design's Education Award for his contributions to design history, theory, and practice. Currently, his research is directed toward metaplanning, structured planning techniques, computer-supported 'dynamic' diagramming, and the development of design-support systems employing computer-assisted processes.



## FACULTY QUESTIONNAIRE

### 1. How would you define graphic design as presently taught at your school and evidenced in the work of faculty and graduates of your program?

**U of A:** I would define graphic design as the conception and production of visual communications conceived to affect the knowledge, the attitudes or the behaviors of people. In this school we concentrate on information design and educational materials. We also deal with communications related to social problems, and in this case attempt to produce pieces that relate to persuasion.

**CalArts:** Graphic design is the experiential/graphic representation of thought.

**CMU:** A few years ago we changed the name of our program from graphic design to communication design. We saw this change in name signifying that our program was growing beyond the tradition of 'graphic' design. In our communication design program we teach issues that involve graphic design but we also teach forms of electronic imaging, for example. We expanded the notion of graphic design while we still maintain a strong belief in teaching basic visual skills, no matter what the technology is—whether it's a pencil or a computer. Our graduates as well as our faculty are comfortable with traditional graphic design, digital imaging and other forms of technology.

**SVA:** Our (*MFA*) program peruses the creation of content as entrepreneur, producer, director, etc.

**IIT:** 'Graphic' design has not, within memory, been taught at IIT as strictly graphic design. Decades ago, the title of the program was changed first to visual communications, then communications design. Today, it is primarily concerned with the transmission of information.

### 2. What characteristics do you feel are unique or defining in regard to your particular school?

**U of A:** There is an aspect of our program at the University of Alberta which is worth mentioning: the pathway structure of our Bachelor of Design. Our program has always benefited—particularly at the graduate level—from its existence in a university with over 75 departments in a variety of disciplines. Interdisciplinary work has very frequently been carried out in our Master of Design program. The Bachelor of Design has always included 20% of History of Art and Design and 20% of humanities and social sciences as a diversification requirement. This structure has recently been expanded by the pathway system, which was created in response to the notion that the field of design is too vast to be included in its totality in a program. Our pathway system also recognizes the diversity of interest and ability among our students, and provides therefore opportunities for development within diverse options. The pathways so far in existence are: computing science, engineering, social sciences, business and marketing, and printmaking. We hope that this structure provides design education opportunities for a wide variety of talents, and responds effectively to the different fields of expertise that the practice of visual communication design demands today.

**CalArts:** Emphasis on developing individual voices and entrepreneurial attitudes. We don't give our students a palette of forms and ask them to manipulate the arrangement of the given vocabulary. We try to foster experimentation—to make smart AND sexy work that's meaningful. There is a great emphasis on thoughtful content and inventive form.

**CMU:** We are a small design school (offering a communication and industrial design major) in a research university. We believe in interdisciplinary work. We have ties, through various projects, to other parts of the university, especially the English Department, the School of Computer Science, the Graduate School of Industrial Administration (our business school), and Carnegie Institute of Technology (our engineer-



ing school). Because we are in a university setting, our program provides a sound education in the liberal arts, while offering a professional education in design.

**SVA:** The above. Plus we are aiming towards the real world rather than total blue sky. Our students are required to develop ideas and 'products' that have feasibility or viability in the marketplace, whether for ten or 10,000 people.

**IIT:** Our program is only a graduate program, is a "user-centered communications design" track in parallel with a "user-centered product design" track in a professional, 64 credit-hour Master of Design program. The user-centered tracks are paired against a design-planning track as the major choice to be made by a student taking the professional program. The school also has a research program with a 32 credit-hour Master of Science in Design degree and an 84 credit-hour PhD degree (beyond the Masters). All programs are strongly concerned with theory and process.

### 3. What skills do you feel undergraduate students should leave with?

**U of A:** An ability to contextualize graphic work within cultures and subcultures. An ability to confront complex problems in a systematic way. An ability to listen and understand both clients and public. An ability to gather information, organize it and develop design briefs. A superior ability to organize the visual presentation of information, in all its tonal and formal dimensions. An ability to use all current production technologies for print, and the necessary knowledge to prepare jobs for print production.

**CalArts:** Adaptable, progressive, independent, experimental, passionate, informed/literate/analytical, and skilled. Adaptable: able to practice no matter what the circumstances since the circumstances are in constant flux, able to move from specialized activities to generalized ones and vice versa. Progressive: progressive because there's no longer a model; ability to reinvent yourself, able to map the future. Independent: contextualized independence: able to recognize contexts and circumstances of practice and from there work independently as graphic designers. Experimental: emphasis on true experimentation through developing understanding of aesthetic value: way communication and visual form function. Informed/Literate/Analytical: exposed to a body of knowledge: knowing both how to be informed as well as having been exposed to a body of knowledge. Being literate means being able to make connections between ideas through analysis. In order to be literate students need to be generously exposed to ideas. Skilled: able to proficiently make, as well as possessing skills that enable moving beyond existing skills.

**CMU:** We are a school that takes a socially responsible, humanistic approach to design. As stated in our school's literature, "We emphasize the importance of individual voice, and vision among ourselves and our students seeking productive pluralism and diversity within a larger community. We emphasize that effective design requires both knowledge and intuition, that design is both a problem finding as well as a problem solving activity requiring knowledge from many other fields and disciplines gathered in well rounded individuals who recognize both the strengths and limitations of analytical methods. We emphasize the increasingly interdisciplinary, integrative, and collaborative nature of our discipline requiring conscious competence in group processes and skills of cooperation as well as strong attention to interdisciplinary connections among design and other fields."

In our curriculum we also teach students basic and advanced skills, such as drawing and ideation, typography, photography, digital prepress processes, and presentation, i.e. in verbal and written forms. Through the program our students work in a studio environment. They have experience working in multi-disciplinary teams and understand the different roles that designers play.

**SVA:** Mine is a grad course, but I believe that undergrad is preparatory for the real world. They should be well equipped with all the technologies and as much honed talent as possible. I urge our applicants to be in the profession for a couple of years before returning to grad school—especially THIS one.



#### 4. What skills do you feel graduate (*Masters*) students should leave with?

**U of A:** An ability to confront complex problems and design research strategies. An ability to analyze complex information and undertake long-term, multi-variant research projects. An ability to use oral and written language at a superior level. A superior ability to deal with visual systems. A basic knowledge of cognitive processes.

**CalArts:** The same as above, only at a much higher level. “Able to proficiently make” is what they should come to the program capable of.

**SVA:** Grad students are ADULTS. They should be able to do ANY and ALL projects. They should be THINKERS and DOERS. The grad school gives them an opportunity to further mature. By the time they graduate, they should be fully functioning creators.

**IIT:** I tell our students that they must achieve mastery in three areas. First, they must be able to visualize concepts. As designers, they will always have the responsibility for making concepts visible for those they work with and for. This is a core responsibility. There are many ways to visualize concepts, and they should become very good at ones they feel most able to use. Second, they must be able to work with others on teams. They must learn to be sensitive to others, to bring the best out of a group, and to deploy group/individual skills appropriately in different phases of a project. Third, they must be able to bring a methodology to a team. They should have mastered design theory and methods to the level that they are able to lead a team (including non-designers) in the development of advanced concepts. For the communications designer, the kinds of projects will tend toward service, experience, communications, information systems, etc.; for the product designer, the projects will tend toward systems of products, environments, and services involving products.

#### 5. What skills do you feel PhD students should leave with?

**IIT:** The PhD is for research and teaching. It is not a merit badge for professional designers. Therefore, the goals are different: critical thinking, contributions to the development of design knowledge, writing, teaching, communicating. We expect our PhD graduates to contribute to a movement toward changing the way design is taught and practiced. This is a big order, but very necessary in an age where man’s impact is becoming the primary influence on society and environment. Heretofore, design has been primarily a tool for adding market value to products and messages. It has much more to offer. But to provide it, designers need to gain influence in institutions and government—must move beyond the corporate design department. To make this possible, we need to change the way design is taught and we need to seek out students interested in high-level design theory and processes and able to work toward their development.

#### 6. How do you address the teaching of emergent forms in new media that involve motion and sound?

**U of A:** We don’t do this in a systematic way. I am not familiar with what is being done in those specific courses and what I have seen is very elementary.

**CalArts:** I don’t really think the forms to which you’re referring are emergent any longer. Motion and sound are components of meaning integral to the meaning-making environments of words and pictures. The difficulty in teaching students to work with these concerns teaching new skills and theories of working that design faculty might not be versed in, but we have educated ourselves and so this isn’t such a problem.



**CMU:** A few years ago, we introduced a course taught by Professor Daniel Boyarski called *Time, Motion and Communication*. We also hired faculty member Suguru Ishizaki, an interaction designer, whose expertise is in kinetic typography. We see that emergent forms in new media provide a wide range of new tools for designers. Because design is an ever-changing field, our faculty keep current by attending conferences and maintaining a strong presence in the design community—both in terms of the profession and education. We try to integrate technology and new forms of design into our program as the world changes.

**SVA:** We have workshops for the hard and software operation (including things like AfterEffects, Media 100 and sound editing) and two – three conceptual/practical courses in Web, TV and film where students are able to use the technical skills to create content.

**IIT:** We treat the problem, not the symptom. In other words, we don't have courses that isolate particular skills. We do have a wide variety of courses that focus on particular areas of theory or applied knowledge, but we don't have so-called training courses for credit. We have faculty expert in sound and animation, for example, but we do not have a course in animation or a course in sound. The media forms are integrated in projects that are concerned with interaction usually, or are introduced in design workshops where the usefulness of multi-media is a clear part of the project.

## 7. How do you deal with the need for students to be knowledgeable in a growing number of software programs?

**U of A:** It just happens according to need. Undergraduates deal basically with PageMaker, Photoshop, Illustrator, and now will add QuarkXpress. We also offer specific courses at the third and fourth year level, which are oriented toward the electronic image, movement, web design and interactive media. But all these courses have an introductory function, not representing highly developed specializations.

**CalArts:** They've got to understand the basic concepts of how software works so they can readily transfer that understanding to other software. They've got to learn how to learn.

There are two major opportunities for students to learn software incorporated within the program and then some less concentrated, but still essential opportunities: The major ones are *Basic Macintosh for Designers* and the workshops. *Basic Macintosh* teaches the essentials of Quark, Photoshop, Illustrator, scanning and essential things to know about the Mac. The workshops are highly specialized: Sound, Lingo, Flash, After Effects. These are for credit, but unlike Basic Mac, this isn't a required class. The workshops are open to all students—undergrad and grad. Graphic Design classes offer introductions to some software, such as Director and Premiere but it's underplayed because the emphasis in these classes is on design not software. *Beginning Multimedia*, which is a required 3rd year class, introduces HTML and possibly Director. *Motion Graphics* includes some coverage of digital video software and related programs.

**CMU:** In our program, software, which is constantly changing, does not drive the courses. Most studio classes involve one or more computer-related projects, and students learn the necessary software through short workshops offered in conjunction with the studio. Our first year students take a course called *Computer Skills Workshop*. This course gives them an understanding of the basic programs in the Mac platform which they will continue to build on in their later years. Some courses are taught with a TA who helps the students learn the appropriate technology.

**SVA:** Workshops and practice.

**IIT:** This is a training issue, and we either introduce the software as part of the set of tools to be used for the larger issues to be addressed, or we hold a voluntary, free, no-credit class after hours. There is also



always student-student training going on among those with exotic software knowledge (remember, ours is a graduate program with 80-90 graduate students with much experience).

8. Is there a particular branch, area, or type of design that your school's graduates are particularly prepared for?

**U of A:** Information design.

**CalArts:** Motion graphics, web design, type design.

**SVA:** No. Remember this is a new MFA. We will graduate our FIRST class next year (2000). So we won't be able to trace or track this progress for a while.

**CMU:** Our program is a generalist education. Our students are prepared for a wide variety of design careers. They are prepared to enter the profession of graphic and communication design with the emphasis on type and image in visual communication and interaction design. Our students are good thinkers and problem solvers.

**IIT:** Our professional students usually go into companies or institutions where design is already used in the earlier, conceptual phases of product development or there is a desire to make changes in that direction. The design planners, particularly, go into advanced planning positions where they work with others from different disciplines to conceptualize products and systems for future development. PhD students, so far, have gone into university teaching.

9. How do your particular urban context and academic surround influence curriculum content and the student experience in general?

**U of A:** I think this is inescapable. This is not New York, Los Angeles, or London. Students are familiar with some aspects of contemporary visual language but the tone in general is rather conservative and restrained. The university itself, however, provides an extensive conceptual environment, where research in a wide variety of fields is developed at the best international level. While the City of Edmonton is not a major center, the university itself provides an extremely rich environment and compares well with the best North American universities.

**CalArts:** On a practical level, the dominant industry in LA is entertainment, which means there's a demand for students who do motion work and web design. That's why there's some emphasis on this. But on another significant level, the urban context is a sophisticated one and we demand sophisticated work from our students. Students have to know what's happening in the culture in order to engage with contemporary ideas. As designers we're ambassadors to culture—which means we have to know what's going on at all levels.

**CMU:** In the junior and senior level courses, we want to use our urban context and our academic environment in our curriculum. For example, in a senior level course called *Integrative Product Development Design* students work with engineering and business students to develop new products for the general community. We have also done projects directly related to businesses and community groups. As examples, we've worked with the Carnegie Museum of Art to design an interactive exhibit and wayfinding; we've worked with the community on a literacy project; we worked in a senior home to design a wayfinding system; and we worked with the local supermarket chain to design point of purchase display and in-store identity. These are just a few examples. Every senior must take a "senior project," which usually takes advantage of working with local clients or urban issues.



**SVA:** The students live and work in NYC. Therefore, they are exposed to EVERYTHING a real market has to offer. For their final thesis projects (an original product from start to finish) they must go out into the marketplace and try to SELL it to a producer, distributor, etc. Being in NYC is an advantage in this regard.

**IIT:** There is no substitute, in my mind, for a good urban environment for a school. The available cultural, technical and commercial resources are unparalleled. Information is not so much of a problem, what with the internet, but “being where the action is” is an intangible that always favors the urban (large urban) location. In our case, we also use the wealth of commercial and institutional organizations as field sites for our research studies. Cooperative arrangements with these local resources are a significant asset. Finally, there are opportunities for special educational programs for executive education and continuing education that are only possible in the urban environment.

#### 10. What changes would you like to see in your program?

**U of A:** I have no problems with the program as it is. I do not believe that there is only one way of doing this. It has to be intense. And our program is. It has to involve thinking and talking. And our program does. There is a bit of visual poverty in the work of the students, but I do not know how to address it. The environment does not help, it would be easier in Rio de Janeiro.

**CalArts:** An even more increased level of energy. The students need to feel caught up in an atmosphere that's fun and lively—it creates momentum.

**CMU:** We feel as though we have very good communication within our program between students, faculty and staff. Our faculty meets regularly to discuss our needs and concerns; we believe that our curriculum is one that is flexible and accommodates change; and we have a solid, bright student body that demands a fine education. We are drastically short of space, but are on the verge of acquiring additional space that will allow us to maintain the quality of our program.

**SVA:** Again, we are a new program, so change is not the issue—improvement is. Learning from mistakes and capitalizing on success.

**IIT:** Our program is always changing. We just (1991) completely revised our graduate program, and already we have revised our “Human-Centered Design” track, added and subtracted probably twenty courses since then. We are considering a completely new track now, and just voted to replace four core courses with four new ones. A change I have been working toward is a more substantial commitment to research. When we made the complete revision in 1991, the new MDes professional degree got the major share of interest. We expected that, but thought we would have more interest in a research MS degree. That did not develop, so we are now working on a revision to the research side that will offer a (we think) more attractive MS to go along with the PhD. I think that this is a very important direction for us—and for other schools—if we are to move toward a goal of changing how design is taught and practiced.

#### 11. How do you see definitions of graphic design broadening or changing in the future?

**U of A:** I think the center is shifting from a universal paradigm based on visual styling to culture-and-purpose-specific paradigms centered on the way people are affected by the communications.

**CalArts:** I do NOT see the definition of graphic design broadening or changing. If the definition changes then how is it still graphic design? But I do feel that the reason it doesn't need to change is that for me Graphic Design holds plenty of room in its existing definition as the visual representation of thought. So I guess the answer might be that it depends on how graphic design is defined.



**CMU:** As we state in our literature, "While we foster a respect for the rich history of book, letter form and print design, we are also fascinated with the potential that technology and new theories of human interaction hold for the design of future modes of communication." We see the designer as the potential catalyst for change, a potential leader, and innovator in this new environment that is driven in part by the affordances of new technology. We see the designer as someone who is capable of creating new products that will influence the world directly.

**SVA:** This is the basis of our program. We are trying to help define that change. Hence, the designer as author, producer, entrepreneur is our mantra and the state of the field for the future.

**IIT:** Graphic design has broadened substantially to communications and information design. There will always be a need for the art of graphic design, but the need for visually adept designers to deal with the complexities of information processing is growing exponentially. This means the melding of visual skills with cognitive human factors and the ability to analyze systems. Visual information systems will be the goal.

## 12. What resultant changes do you anticipate in educational structures and processes?

**U of A:** More intellectual questioning and development but without reducing visual sophistication.

**CMU:** We are open to our curriculum growing and adapting. We instituted a BS in Human Computer Interaction in 1997. This is a second major option for students in Design, Computer Science and the Humanities. We did this because there were demands in the design profession for our students to have a more in-depth education that connected the fields of design, computer science and behavioral sciences. We are sensitive to our field evolving and we want to respond to the profession in our educational programs. We see the increasing needs of interdisciplinary, integrative and collaborative nature of our discipline.

**SVA:** I foresee more programs broadening to include interdisciplinary activity.

**IIT:** More graduate education is a certainty. How much distance learning will develop is less clear, but it will certainly become a factor. I personally do not think it will replace one-on-one, on-site teaching, but there is definitely a place for specialized distance learning. Schools at the graduate level should specialize to some extent to take advantage of the concentrations of like-minded faculty and students that can be achieved in that way.

## 13. What qualities do you look for in a prospective faculty member?

**U of A:** Intelligence, sensitivity, curiosity, awareness, ethics, and social responsibility.

**CalArts:** An understanding and empathy with what we're doing, but also someone who's different from us—someone who brings some thinking and/or experience that broadens what we can offer and how we think about what we're doing in some interesting way. We also look for people who are accomplished in some area of graphic design in their own right.

**CMU:** First and foremost, we look for someone who is passionate about design and teaching. We want faculty who can communicate the depth of their design understanding. We also seek faculty who are actively connected with the profession as practicing designers, educators and theoreticians. We place a great deal of emphasis upon 'making' and on 'thinking'. We want our faculty to be compassionate, nurturing, and have high standards. We also want our faculty to be able to work as a team.



**SVA:** Professional, inspiring, willing, knowledgeable, able to bend, and unique ideas about pedagogy.

**IIT:** A faculty member must be able to teach and do research. For design, research is harder to define than it is for the science, technology and scholarly disciplines, but in general this means contributing to design knowledge. Sometimes this is through applied activities such as the development of new solutions to design problems; sometimes it is through more basic research such as the development of new theoretical models, design processes or tools. The point is, it is not enough today to be a good teacher. That should be a given. It is now necessary to be able to help us to advance the discipline. Incidentally, this also means a faculty member must communicate!

14. Please comment on the relative importance that your school places on the following issues: authorship and entrepreneurial approaches, the designer's voice, traditional print media, new media, user needs, research-based design, and interdisciplinary processes.

**U of A:** Authorship: inescapable, but not something to be fostered. The designer's voice: again, inescapable, but not to be pursued. Traditional print media: yes, we use it, need it and like it. New media: we do it, but do not have much expertise. User needs: I believe they are very important, but not sufficient. Research-based design: when necessary, it's not responsible to do without it. Interdisciplinary processes: wherever appropriate.

**CalArts:** These are all fundamental to contemporary graphic design practice as we see it, with the exception of interdisciplinary processes. This goes back to your question about changes in the definition of graphic design possibly. While we recognize the need for collaboration with other disciplines, I wouldn't say we teach "interdisciplinary processes." Also, we would probably say "users and audiences."

**CMU:** Our school places a great deal of importance on all these issues. In our courses we teach a working process that incorporates all the above.

**SVA:** I think I've covered this above. The only thing I will add is that the so-called "designer's voice" is endemic in the entrepreneurial process. We are interested in fomenting GOOD IDEAS not STYLE. If a designer has a signature, it must underscore and enhance the project, not be an end in itself.

**IIT:** In relative importance (1 = high), I would order your topics as follows: 1. User Needs, 2. Research-based Design, 3. Interdisciplinary Processes, 4. New Media, 5. Authorship and Entrepreneurial Approaches, 6. The Designer's Voice, 7. Traditional Print Media.

15. Are there additional concerns that you might wish to comment on so as to further describe your school's approach?

**U of A:** I would like to center all activity in the context of social responsibility. But I also would like to stress that this does not end with "doing the job." All of us should contribute to awakening people to the enjoyment of life. All the time, in any activity. Graphic design should be useful, but useful is not enough. One has to experience some form of pleasure when confronted with a graphic design. The notion of cultural contribution should be always present in both design education and practice.

**CalArts:** This program seeks to maintain itself at the cutting edge of the field of graphic design as thinkers and as form makers contributing to the field and moving it forward, respecting the moment while bringing it toward the next. We recognize our changing context of practice within rapidly evolving communications technologies, while maintaining clarity regarding our position as graphic designers within this scope of change.

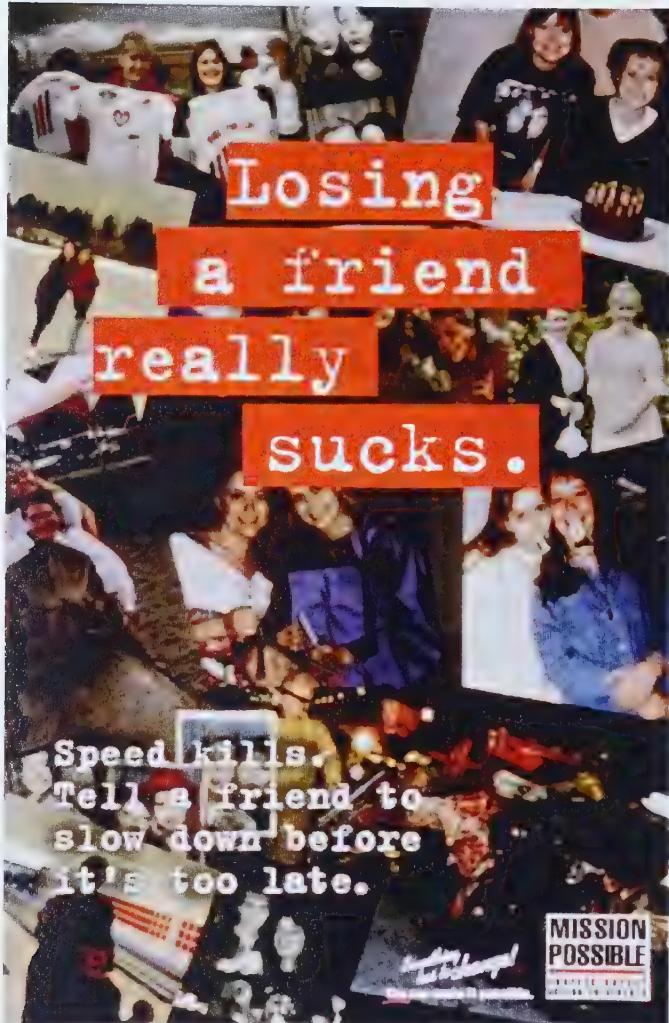


**SVA:** A new program without precedent is very exciting. But it is also a curious mix of joy and anticipation. Are we doing the right thing, how can we do it better, are we touching the pulse? All these questions and more will be addressed in time.

**IIT:** The Institute of Design was founded by Laslo Moholy-Nagy as a school very much modeled after the Bauhaus. In fact, Moholy called it the “New Bauhaus” in its first incarnation. What I think has continued unchanged over its existence (I studied at the school in 1951, returned for an advanced degree in 1961, and have taught here since 1965) is its commitment to experimentation. Over the years the school has always responded early and quickly to new ideas whether they sprang from changes in societal understanding or emerging new technology. I hope that we will continue to follow that principle. As Heraclitus once said, “There is nothing permanent except change.”



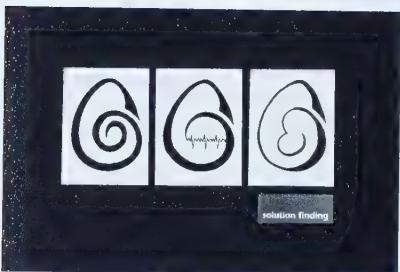
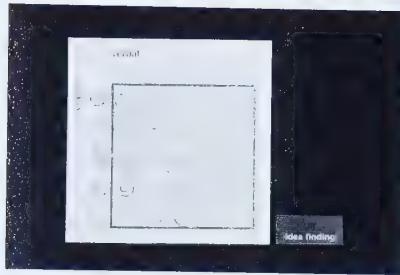
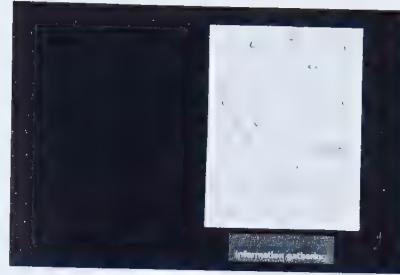
CHAPTER 4  
STUDENT WORK FROM EACH OF THE FIVE PROGRAMS  
UNIVERSITY OF ALBERTA



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University of Alberta  
Poster Design  
Visual Communication Design  
Year 4  
Susan May

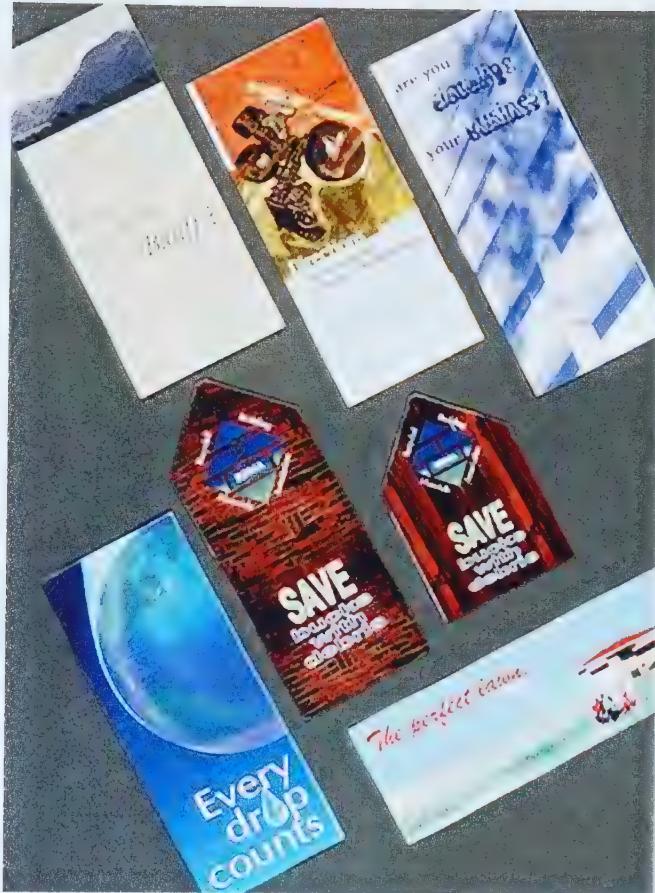




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University of Alberta  
Logo Development and  
Poster Design  
Visual Communication Design  
Year 3  
Anick Deschenes

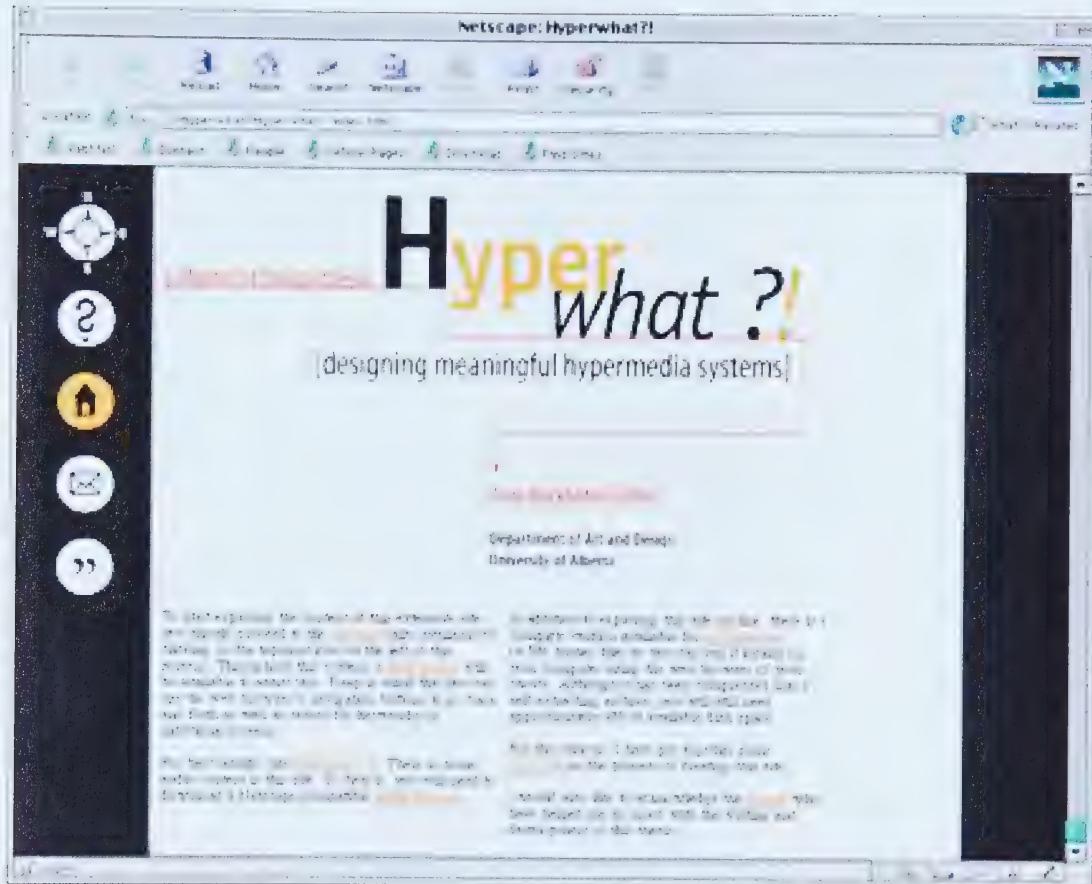




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University of Alberta  
Ecology Pamphlets  
Visual Communication Design  
Year 4  
Various students

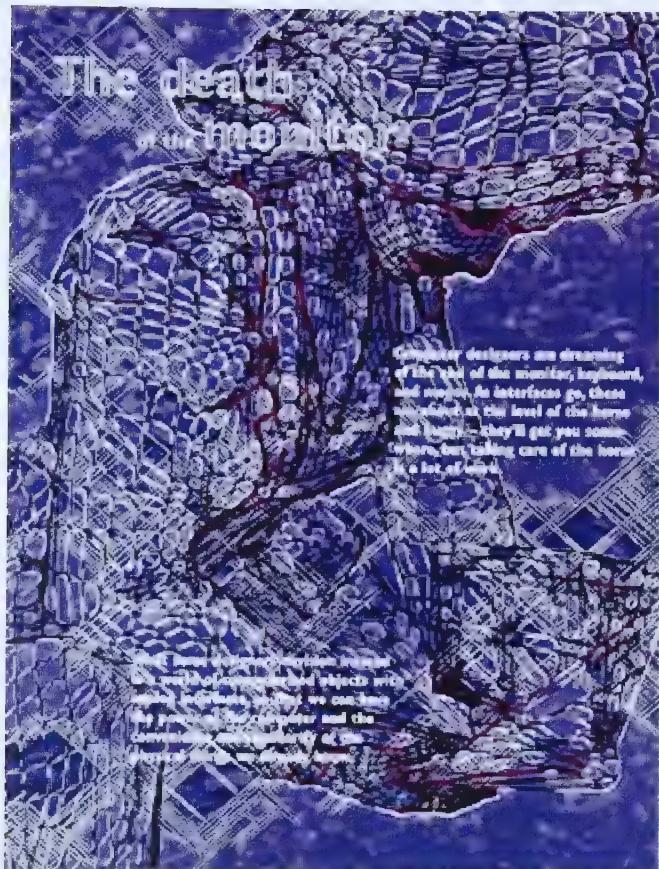




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University of Alberta  
MDes Thesis Project  
*Hyperwhat?! Designing meaningful  
hypermedia systems*  
Aura Beckhofer-Fialho



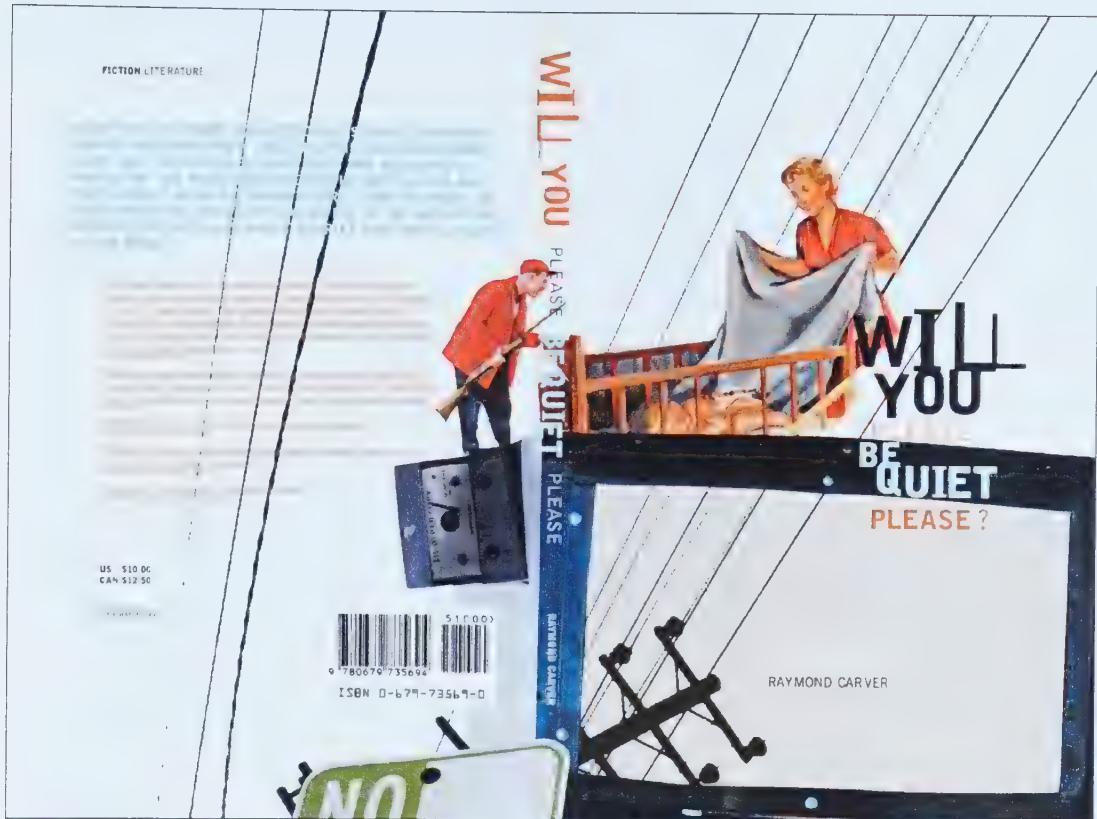


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University of Alberta  
MDes Thesis Project  
*The Bi Sheng Electronic Book. More  
like a Book, less like a Computer*  
Stan Ruecker



CALIFORNIA INSTITUTE OF THE ARTS



California Institute of the Arts  
Book Cover  
Graphic Design Year 3  
Johnathan Notaro





California Institute of the Arts  
Retail logo and promotional  
sequence in Adobe Premiere  
Graphic Design Year 2  
Jen Hopkins





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California Institute of the Arts  
Poster for CalArts event  
Graphic Design Year 3  
Johnathan Notaro



ARBITRARY SANS  
ONE IOTA  
PLATELET  
TRIBULATION  
WORMWOOD

---

California Institute of the Arts  
Typefaces  
Designed by Graphic Design  
students and alumni



This story is a metaphor about how design transforms a message.



Think of Gertrude as the message.  
Think of the hairdressers as designers.  
Think of the beauty salon as a design studio.

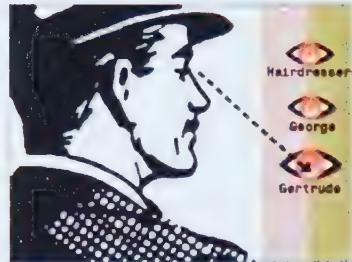


06.27

metaphor

A metaphor compares two unrelated things, possibly in a poetic way.

Gertrude was a housewife in Newhall, California. She'd been married to George for 20 years. Every Saturday, Gertrude went to Martha and Rae's Beauty Salon looking just like Gertrude and she came out looking just like Gertrude.



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California Institute of the Arts  
MFA Thesis Project  
*Design: A Torrid Tale of Transformation*, interactive CD-Rom  
Louise Sandhaus





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Carnegie Mellon University  
Packaging Design  
Experimental studies for Crayola  
Communication Design Year 4

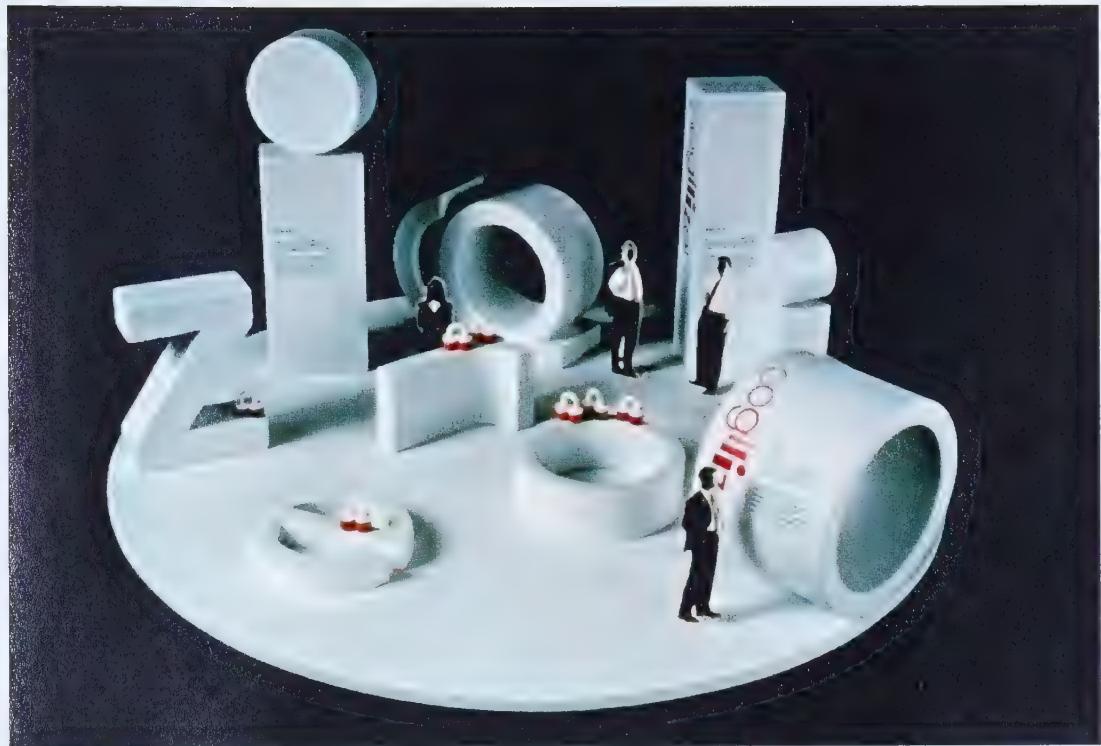




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Carnegie Mellon University  
Poster Design  
Communication Design Year 4

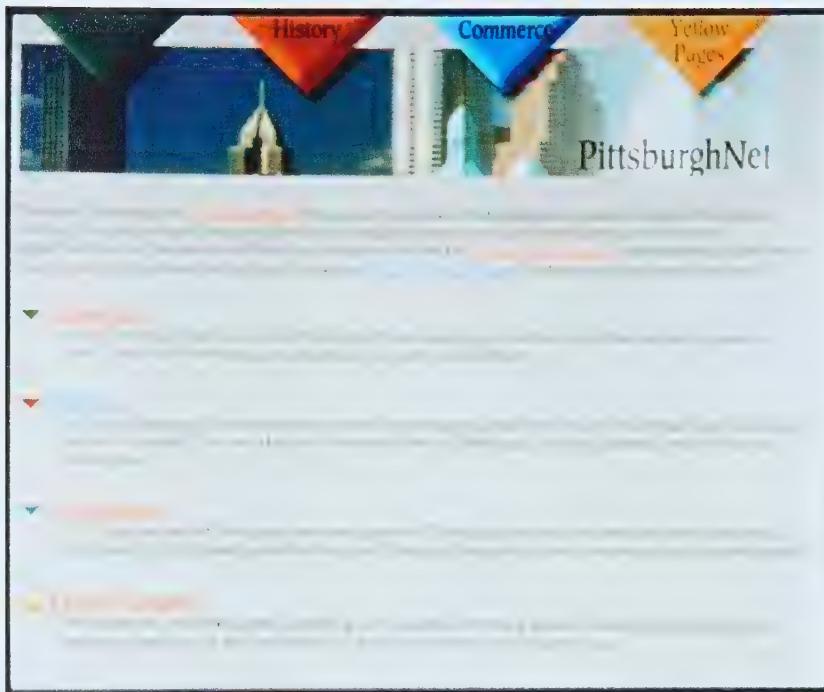




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Carnegie Mellon University  
Trade Show Display  
Communication Design Year 4





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Carnegie Mellon University  
Pittsburgh Net Home Page  
Graduate Project



2010

Why?

$\frac{R}{C} = \frac{1}{2} \frac{b^2}{a^2} \frac{t_0^2}{t^2}$

Why?

Reconstruction

Reconstruction

did not lose my mind to cancer



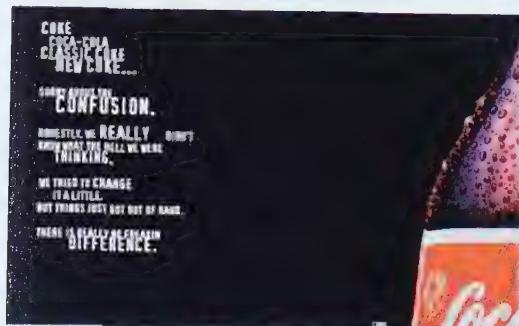
SCHOOL OF VISUAL ARTS



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School of Visual Arts  
Advertisement Design  
Advertising Program  
Matthew Gargano





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School of Visual Arts  
Advertisement Sequence  
Advertising Program  
Keri Roy





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School of Visual Arts  
CD Package  
Graphic Design Program  
Anselm Dastner





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School of Visual Arts  
Poster Design  
Graphic Design Program  
Sha-Mayne Chan





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School of Visual Arts  
Autobiographical Magazine  
MFA Design Project  
Martina Salisbury



ILLINOIS INSTITUTE OF TECHNOLOGY



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Illinois Institute of Technology  
*Reconfigurable Communication Tool  
and Behavioral Prototype*  
MDes Human-Centered Design  
Jason Stanford



## Human Factors Matrix



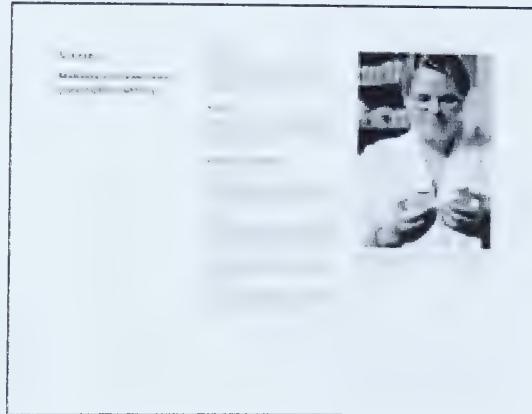
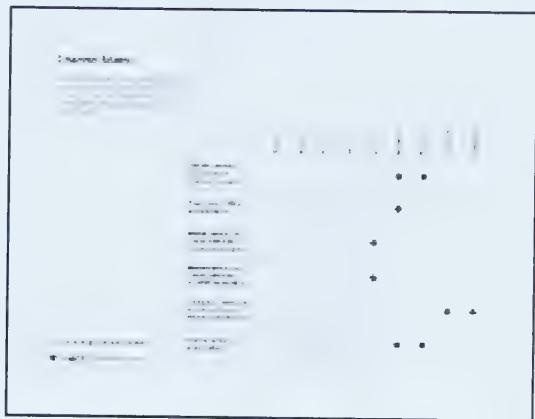
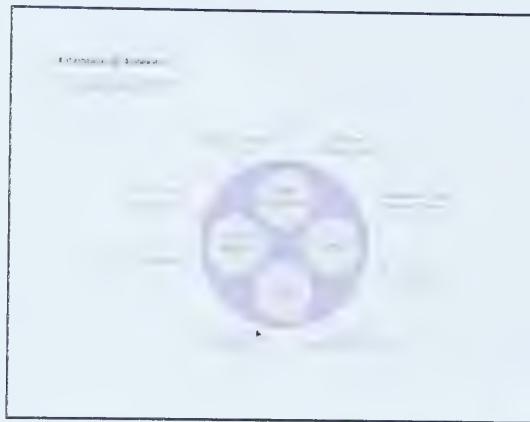
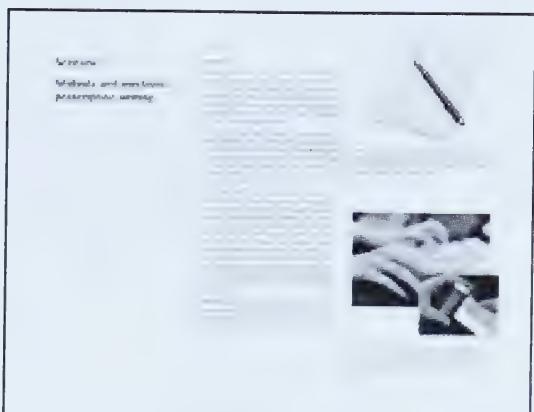
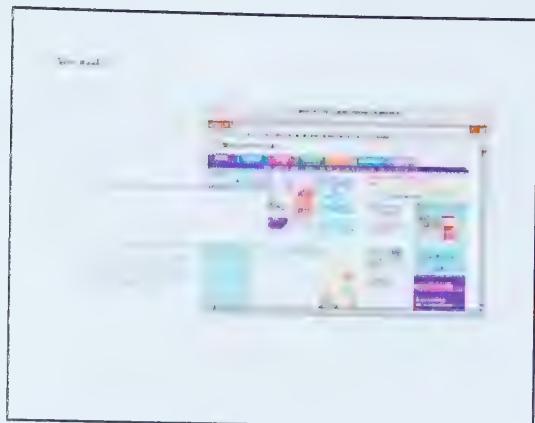




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Illinois Institute of Technology  
*Interactive TV Interface Control*  
MDes Human-Centered Design  
Bill Hartman

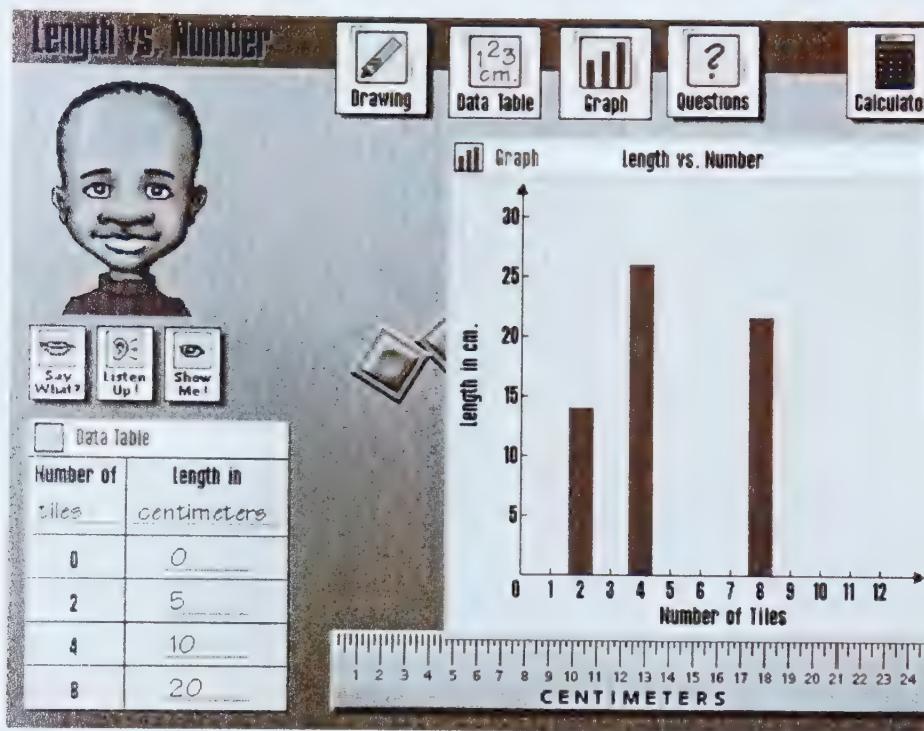




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Illinois Institute of Technology  
Interactive Media Project  
*Creating Multi-channel User  
Experiences for Drugstore.com*  
Joanna Barth, Kris Kohuth, Ryan  
Powell, Jane Schaefer, and Ann  
Zimmerman







**CHAPTER 5**  
**ALUMNI QUESTIONNAIRE**  
**Respondents**

1) Aura Beckhofer-Fialho  
School: University of Alberta  
Program: MDes Visual Communication Design

2) Rosan Chow  
School: University of Alberta  
Program: MDes Visual Communication Design

3) Zoe Strickler  
School: University of Alberta  
Program: MDes Visual Communication Design

4) Deborah Littlejohn  
School: California Institute of the Arts  
Program: MFA Graphic Design

5) Kali Nikitas  
School: California Institute of the Arts  
Program: MFA Graphic Design

6) Jodi Forlizzi  
School: Carnegie Mellon University  
Program: MDes Interaction Design

7) Timothy Hsu  
School: School of Visual Arts  
Program: BFA Graphic Design

8) Roswitha Rodrigues  
School: School of Visual Arts  
Program: BFA Graphic Design

9) Jan Kiaer  
School: Illinois Institute of Technology  
Program: MDes Human-Centered Communication Design



## ALUMNI QUESTIONNAIRE

### 1. In what year did you graduate from design school, and what degree did you obtain?

Beckhofer-Fialho (U of A): 1997, Master of Design (Visual Communication Design)

Chow (U of A): 1998, Master of Design (Visual Communication Design)

Strickler (U of A): 1993, Master of Design (Visual Communication Design)

Littlejohn (CalArts): 1992, BFA Western Carolina University, concentration in Graphic Design; 1994, MFA CalArts, concentration in Graphic Design

Nikitas (CalArts): 1990, MFA in Graphic Design

Forlizzi (CMU): Undergraduate degree - BFA, Illustration, Philadelphia College of Art (now University of the Arts), 1984; Graduate degree - MDes, Interaction Design, School of Design, Carnegie Mellon University, 1997

Hsu (SVA): 1995, BA Graphic Design

Rodrigues (SVA): I only went to SVA for one year and did not graduate, since I already had and basically completed a senior schedule during the academic year of 1995/96.

Kiaer (IIT): Graduated in 1993, Master of Design in Human-Centered Communication Design

### 2. What factors influenced your choice of a post-secondary institution?

Beckhofer-Fialho (U of A): I was looking for an institution that offered graduate degrees both in industrial design and visual communication design. University of Alberta seemed to be the most appropriate. Met the professors, liked them. Saw the environment, liked it too!

Chow (U of A): Faculty, location, close to home, familiarity.

Strickler (U of A): I had already been working as a designer for 10 years when I decided to go to graduate school. I did not feel 'stale' as a designer, but rather I felt that my undergraduate design education (and I think this is true of nearly all current undergraduate design education) had not prepared me to solve the 'real' problems I was encountering in practice. Specifically, design education does prepare designers to understand the audiences we design for in any meaningful sense. The field does not have a body of literature to which designers can turn (as, for instance, physicians and lawyers turn to their bodies of relevant research) to help us understand the factors that influence how specific audiences will interpret designed communication or the factors that may inhibit their ability to use or learn from the products we design. I chose the program that I thought would best permit me to study methods and theory from other disciplines and how precedents from other fields might help design researchers begin to produce a useful body of literature—what you might call a body of 'empirical' design literature that has some validity.

Littlejohn (CalArts): Location—proximity to a dynamic design community. Lorraine Wild was a visiting designer/lecturer during my final undergrad year at WCU, and her presence had a profound impact on my wish to go to CalArts. I applied only to CalArts because that was where I was determined to go.

Nikitas (CalArts): My need to be a better designer.



Forlizzi (CMU): I felt pigeonholed in my career. I had been working at the University of Pennsylvania as a Publications Designer, and had my own, fairly lucrative, communication design firm. Laying out newsletters, etc. started to feel routine and unstimulating. I started playing with the web, and one project I was asked to work on at U of P was to translate a large engineering textbook into a CD-rom. I felt unprepared to tackle this kind of project, so wanted education in this new area. I felt that CMU was a good match.

Hsu (SVA): Personal interest.

Rodrigues (SVA): Primarily the reputation of the institution, secondarily its location.

Kiaer (IIT): A couple of factors influenced my decision. My design job at the time was no longer challenging to me. I had begun to read on a regular basis more journals related to business issues. I was somewhat unconsciously searching for more depth in what I was doing. I read an article about that time in ID magazine about a new program that was being offered at the Institute of Design. I was intrigued by the approach to design that was described. It took into consideration many factors I had never considered before. It seemed more robust, covering different design dimensions. I sent away for some information. When I received the course outline and descriptions, I was hooked. I knew then that this was what I was looking for.

### 3. What was your particular area of interest or specialty in the program?

Beckhofer-Fialho (U of A): Hypermedia systems (online information/educational environments, i.e. web sites). Although I also enjoyed designing and printing a limited edition book on the Vandercook letter-press (quite a contrast between the two!)

Chow (U of A): I was interested in knowing nothing in particular but a little bit more about design generally and how I can make good use of my knowledge to make a difference, so to speak.

Strickler (U of A): Public health and safety communication, with a special concern for how visual/verbal messages might be conceived and designed to influence adoption of 'safer' behaviors among members of high risk groups. I worked on the focus group and survey components of a larger study of driver beliefs and behaviors among 18-24 year-old male drivers.

Littlejohn (CalArts): Interactive media design; particularly the study of interface design and related narrative structures.

Nikitas (CalArts): Print media, typography, work with a social agenda, creative freedom, clients who themselves are in the arts.

Forlizzi (CMU): My area is interaction design—broadly defined, how people use products. Within that area, I am particularly interested in human experience as it relates to interaction design.

Hsu (SVA): Foundations for understanding design and communication.

Rodrigues (SVA): I had worked for several years but always liked the academic environment because of its focus on the development of one's creative process and pushing of limits in a surrounding that allows for play and experimentation. In the "real world" marketplace this is seldom possible because of time and budget considerations. I took (next to my portfolio classes) courses like *Originality* and *Experimental Design Workshop* to take advantage of this unique environment. I also took 3-dimensional design, which I enjoy doing.



Kiaer (IIT): My background (including undergraduate degree) is in graphic design. I spent about seven years working for a design firm before going to graduate school. I continued to focus on “communication design” (actually information design). But at ID, the focus isn’t on an area like that per se, it’s all the surrounding elements that play on communication or product design. For example, when I was going through the program, the area of electronic design, interactive multimedia, etc., was just coming into focus. So the landscape was huge for exploration and extension of design considerations beyond the traditional approaches of typography and image and layout. It included navigation, orientation, feedback—other dimensions of communication, and how users interacted with and interpreted what was happening on screen.

#### 4. What expectations or goals did you have prior to entering the program?

Beckhofer-Fialho (U of A): I wanted to go back to school because I felt that I had reached a point in my career where I wanted to learn new things and have the opportunity to explore different areas without the constraints of everyday work. I was particularly interested in how people interacted with dynamic, computer-aided environments and felt that I needed to deepen my knowledge in this relatively new area. Additionally, I had a desire to teach and knew that I needed a Masters degree in order to do so and at a level in which I would feel comfortable. I also felt that I was lacking certain basic knowledge of visual communication design and wanted to fill in those gaps.

Chow (U of A): Rejuvenate myself and to seek new directions.

Strickler (U of A): My goal was to learn as much as I could about how experimental research is conducted in the social sciences and to look for ways in which existing methods and bodies of theory can contribute to development of research methods of equal rigor in design research.

Littlejohn (CalArts): Because I entered grad school directly from undergraduate studies without ever practicing, I was there to work and to make. I didn’t have any long term goals set out for myself as I left for grad school, other than to get my degree and be able to teach with an MFA.

Nikitas (CalArts): To make my work look better.

Forlizzi (CMU): I had few expectations. At the time I entered the graduate program, it was new, and I expected that bumps and hiccups would occur. My goal was to understand how people read and understand things when using computer applications. I was proficient with software, so I did not expect to learn those kinds of skills. My experience at grad school opened me up to new ways of thinking.

Hsu (SVA): To understand cutting edge design and create new trends.

Rodrigues (SVA): Expanding my creative horizons, having fun growing, getting a portfolio together.

Kiaer (IIT): I don’t recall that I had any particular expectations about the program, except perhaps to deepen my knowledge, and take my design practice to another level. I hate to confess, but I am not particularly goal oriented—like, I’ve got the five-year plan figured out. I have a general sense about things, and am continually exploring, but I let my explorations lead me to places I want to go.

#### 5. In your opinion, what skills should graduating students be equipped with in order to be successful professionally?

Beckhofer-Fialho (U of A): They need to know more than the theoretical. Often, it is practical experience that is lacking, knowing how the so-called ‘real world’ works. Knowing how to deal with people in their



field. Graduate students should also possess knowledge from complementary areas outside their field of expertise.

**Chow (U of A):** The buzzword is collaboration. I think designers now or professionals in any fields can't avoid this as the world gets so complicated and problems get so complex. Graduates of design need to be able to work with other professionals and this implies the ability to communicate clearly and logically and have knowledge of, or at least exposure to, other fields. In the case of Graphic Design, basic understanding in information technology, communication, psychology, cultural studies, English or education will be an asset.

**Strickler (U of A):** I believe undergraduate students (BFA or BDes) should graduate with two bodies of expertise. 1) A reasonably well rounded traditional liberal arts education. Designers first and foremost need to be able to read and interpret, accurately and sensitively, written communication of some complexity. This ability isn't central to solving fashion problems in our field, but it is essential for any problem involving information more complex than "buy these jeans." In most firms, a junior designer will encounter both kinds of problems. 2) A student graduating with a BFA/BDes should be professionally prepared to perform well in an entry-level 'design' position with a good firm. This requires technical education as well as formal education. The graduate should be able to walk into a professional environment as a junior member.

In my experience acquiring both a liberal arts education and a good professional design education takes more than four years—at least five. Undergraduate programs in visual communication design should be five-year programs like architecture and engineering, which serve as the entry level degrees for those professions.

The Masters degree in design should prepare students for 1) Design management positions in professional practice or 2) Prepare students to pursue research or scholarship at the doctoral level. Design faculty at research universities ten to twenty years from now should have doctoral-level education in design history, theory, and/or experimental methodology behind them as well as good studio mastery, if the field is to retain its identity as a 'profession.'

**Littlejohn (CalArts):** Exactly how are you defining 'successful'? I think it is most important to be able to communicate clearly about your work; about your ideas.

**Nikitas (CalArts):** In order to be successful professionally? A history in running a studio and dealing with clients (I was not prepared).

**Forlizzi (CMU):** In my opinion, the most desirable skill is for designers to be able to think through difficult problems, whether it be structuring information or understanding the human experience of an artifact. I imagine that it is good to know current software and languages, but I think that it creates a situation where you can become a production person—carrying out ideas, rather than creating them.

**Hsu (SVA):** Undergrad students should become interested in various companies, to understand how projects are started and to complete them professionally. On top of that, do not rely solely on professor inputs. More searching within peers and developing friendly competition using projects.

**Rodrigues (SVA):** Openness: be comfortable with their creative process, yet aware that it is a never-ending journey of change and development, feel responsible for and connected with their work, have good computer skills (minimum: Photoshop, Illustrator, Quark).

**Kiaer (IIT):** One of the things I have learned since I have been 'out' and working again, is that designers need skills in educating others and selling ideas. I work in a corporate environment that does not neces-



sarily always see the value of good design. It requires a great deal of effort sometimes to prepare an argument for why something should be done a particular way, or why it should be done at all, always presented in the context of how it will improve the business. I never dealt with the business approach to design in my prior working experience. Now it's very much about achieving business results.

#### 6. What were the strengths of the program you attended?

Beckhofer-Fialho (U of A): The professors' diverse competencies and interests offered a wide range of possibilities in terms of pursuing various applications of visual communication design. The faculty was active in terms of organizing conferences and establishing a guest lecturing series that proved invaluable. It was structured, and yet free enough to enable personal explorations.

Chow (U of A): The quality of the mentorship the advisor provides. The interdisciplinary approach it takes. And the intellectual rigor that it provokes.

Strickler (U of A): My advisor was outstanding in terms of his energy, intellect, and the quality of the questions he pursues. I was able to make use of the resources of a large research university, including a well-serviced library and had considerable contact with faculty and other experts from fields outside design. The research I participated in was externally funded such that it permitted original data collection and involved contact with resource persons from a number of relevant fields.

Littlejohn (CalArts): I left CalArts knowing the right questions to ask. I got an entirely different perspective on Graphic Design than what I had held before. When I came to CalArts straight from undergraduate courses, I was totally naive about the way Graphic Design operated... on a social level, on a professional level, that is. What was good? What was not? What to look for in a studio where I wanted to work. The different 'kinds' of Graphic Design. I knew what type of job I would fit best in... unlike some really naive students I saw coming to New York, who only wanted to come to New York, and would work anywhere for anything and do whatever.

Nikitas (CalArts): Faculty, visiting artist program, intensity, reputation, typography, design history, critical thinking.

Forlizzi (CMU): Flexibility. Carnegie Mellon has "very low walls," so it is entirely possible to take classes from other curriculums (cognitive science, social science, English, etc.) and design your own specialty. It is also very easy to create independent study courses.

Hsu (SVA): Top professors within the area.

Rodrigues (SVA): That almost all the teachers are also professionals and therefore closely connected with the "real world," which started networking possibilities—the Graphic Design department in general does an excellent job in connecting talent with the market. There is also a great mix of courses—some more marketplace-oriented, some more esoteric.

Kiaer (IIT): The design methodology, problem solving on a grand scale; using project-based approach to teach concepts, presentation skills, and technical skills; the broad-based curriculum, and the structure of the courses; a forward thinking focus on the influences and trends of business and society that impact design.

#### 7. What suggestions might you offer for improvements in the curriculum of the program you completed?



Beckhofer-Fialho (U of A): It would have been good to have more options available in terms of courses taken outside the department.

Chow (U of A): I understand that program is considered as a professional program but I think I missed the more philosophical and theoretical discussion on design. There was some but I would have liked more.

Strickler (U of A): There wasn't a structured curriculum that was ideal for my goals. Other students might prefer the option of a more structured curriculum. I think this is a question that should be explored across programs. Resources for graduate programs in design are usually quite limited, and for this reason programs should specialize in the areas of expertise of the faculty. Prospective students should choose a program based on the areas of expertise of the faculty. Possible applications of design in the field are far too broad for any program to be all things to all students, but design programs generally do a bad job of declaring and publicizing their particular strengths or areas of specialization. The MFA is still sort of one size fits all which makes it difficult for the field to progress.

Littlejohn (CalArts): The projects and coursework we completed were developed many years ago, and have been assigned year after year. New projects should be proposed for the curriculum, especially with the infiltration of interactive media.

Nikitas (CalArts): When I was there, none. Now that times have changed, I see that the program is adjusting itself to accommodate new media and new thinking.

Forlizzi (CMU): a) Bring more real world problems into the curriculum. b) Enable students to make prototypes that really work—not just mockups on a screen.

Hsu (SVA): SVA provides well-rounded foundations. It is truly up to the individual to open up and be more conscious to surroundings.

Rodrigues (SVA): I really found everything I was looking for. One course that might be useful is a course in production—preparing for print, printing, etc. This is what one usually learns in the field, but it can be very helpful, especially when you start independent freelance projects for your own clients and you have to learn it by trial and error in small steps. And of course, web design is getting more and more important.

Kiaer (IIT): I know that the program runs on a continuous improvement cycle, every year reinventing the courses based on student feedback and relevancy. So, I am not even sure what courses are still being taught. I would hope that it would continue to evolve based on what changes are occurring and how design can support those changes, or drive change.

#### 8. If you completed a thesis or senior project, please describe its nature and your interest in selecting that topic.

Beckhofer-Fialho (U of A): My thesis was entitled: "Hyperwhat?! Designing meaningful hypermedia systems." It revolved around establishing a methodology for designing complex digital environments from content to structure and finally navigation and interface design. I also attempted to 'de-hype' the web in order to focus on its potential usability in educational environments. I selected this topic because I had always been interested in human-machine interaction; perhaps stemming from my previous career in the flight simulation industry where we developed computer-based training for various applications ranging from marine control systems to power plant operations.



Chow (U of A): The thesis is about the design of instructional materials for adult immigrants learning English as a second language. It aims to find out proactively what contribution design can make to the development of the materials.

Strickler (U of A): See above. I was best able to make use of university resources by pursuing my goals in the context of working as a research assistant on existing, funded research in the Department. This model is common in doctoral education, and should be employed in design education more often.

Littlejohn (CalArts): I researched the relationship between interface design and narrative structure in interactive media.

Nikitas (CalArts): I designed postage stamps that addressed the masses on a social topic. The intent was to carry a message, a direction for assistance (the phone number of an organization existed on stamps) and an accompanying card for detailed information, the idea being that there was a venue in which graphic design could impact society at a huge rate (hopefully).

Forlizzi (CMU): My thesis is titled “Human-centered Design: An Approach to Designing for Experience.” My studio project, “Exploring the Personal Essay through Kinetic Typography,” dealt with how people experience moving text and images on screen and co-construct experience with the creator.

Rodrigues (SVA): This is not a requirement of the BFA in Graphic Design, but it would probably be something about the role and the responsibility of designers as communicators in our culture.

Kiaer (IIT): Thesis projects are grounded in actual social or business contexts and include both research and an application of research findings in the development of a product prototype. My project focused on how people could become quickly acculturated to their work environment. It was based on business trends happening at that time including: corporate downsizing, the emergence of different organizational structures, people taking more ownership for their careers; moving from job to job more frequently, playing different roles within organizations. These factors along with an increased pace for operating meant companies have less time to orient individuals, especially consultants or contract workers. My research explored the kinds of information seeking strategies people use to orient themselves in new situations and become a “part of the group.”

I created an electronic information tool that essentially behaved like an application sitting on a computer desktop. The purpose of this tool was to allow newly hired employees to have access to information about their work environment. People can get bogged down because they need more information when they are new and don't know where or how to get answers—or even who knows what information. I was particularly interested in how the ‘softer’ dimension of the organization—the people, might be portrayed in an electronic environment. People's style and approachability can be a big deal to overcome for some.

I am not sure if it is still completely applicable today, but when I went through the program, one of the ground rules of the thesis project was the application of theories and principles from other disciplines to a design problem. My work came mostly from theories and principles found in organizational behavior and in learning. The purpose of thesis work is to find ways to apply theory to practice, using the design processes and methodology developed by the school.

#### 9. Please describe the type of work you are currently involved or interested in.

Beckhofer-Fialho (U of A): I am currently employed at Perot Systems (yes, as in Ross Perot!), an IT firm which, among other things, evaluates companies' computer infrastructures. The team I am currently working in is based in Basel, Switzerland and deals primarily with training and communication. We have recently completed a project that provided web-based application training for 35,000 employees of the



recently merged United Bank of Switzerland. In addition, we are currently involved with the concept of People Change Management, i.e. helping people deal with major changes in their working environment. In addition, we also design promotional materials (print and online) for both Perot Systems' various offices worldwide and for our clients (mainly banks, at this point).

**Chow (U of A):** I am a PhD student (North Carolina State University) interested in finding out what other contribution design can make to help solve social problems. I haven't got a specific topic for research yet, but it will probably be related to education for disadvantaged adults or communication for social change.

**Strickler (U of A):** Empirical collaboration with a research pharmacologist designing and testing an animated, interactive computer learning program for independently living seniors on harmful interactions between over-the-counter medicines, prescription drugs, and alcohol.

**Littlejohn (CalArts):** Primarily, design for cultural institutions, not-for-profit organizations, and educational institutions in print and interactive/digital formats—I am in the process of establishing a studio here in Minneapolis. Previously, I was senior designer at NC Museum of Art and Whitney Museum of American Art, NY. I have also been involved in design education—NC State University, CalArts, and as a visiting designer at Cranbrook Academy of Art.

**Nikitas (CalArts):** Print matter for an art school, contemporary museum and self-generated curatorial projects. I also teach at Minneapolis College of Art and Design.

**Forlizzi (CMU):** I am a Project Manager at E-Lab in Chicago, a consultancy that specializes in research for new product design. We do qualitative, ethnographic research.

**Hsu (SVA):** Art director for Random House, Doubleday. Working mainly in book jacked design. Handbag designer and store owner.

**Rodrigues (SVA):** I am working in an advertising agency, where I head the graphic design department with Richard Wilde. We do a wide variety of projects—logos, brochures, posters, packaging, corporate identity, point of sale, direct mail, web sites, multimedia design, etc. Since many of the clients are pitched from the advertising side, we have the chance to reinvent ourselves with many projects and don't get cast into our own style easily.

**Kiaer (IIT):** I am currently involved in developing a global training curriculum for the company I work for. I apply on a regular basis the design principles and research methodology that I learned in graduate school. I am growing more interested in informal learning in the workplace. In many ways this is not very far removed from my thesis work. It has very much to do with the need to know something at a particular moment in time for a particular need, and having the information available, and accessible for bridging the knowledge gap.

#### 10. How has the program you completed influenced your professional work as a graphic designer?

**Beckhofer-Fialho (U of A):** It basically equipped me with the knowledge I needed to work in the IT industry. I find that what I have learned throughout the program has enabled me to contribute significantly to problem-solving situations by bringing in a slightly different, complementary perspective.

**Chow (U of A):** Since I am interested in research, I will say that my program has prepared me for it.

**Strickler (U of A):** I didn't and don't believe that a design education emphasizing form and intuitive expression is sufficient for designers working in "the age of information." A designer's intuitive, interpre-



tive, and aesthetic capabilities must be highly developed for design work to be perceived as beautiful and interesting by audiences, but these skills alone are not sufficient for addressing many kinds of communication problems. We need a body of literature documenting the ways in which users/audiences actually use and decode our formalized messages. Designer self-reference is a poor model for design practice in multi-cultural and complex information environments.

Littlejohn (CalArts): I know what types of commissions I will not accept, and what type of work I wish to do. I knew that I did not want to work in the commercial for-profit world. I knew that I didn't want to be a part of the fashion/advertising/commercial industry. That is why I went to the Walker Art Center after working with Lorraine for awhile. I have since remained in this not-for-profit/cultural/educational sector.

Nikitas (CalArts): In every single way. How I think, how I put words and pictures together, who I know, where my career has gone from my graduation date and why I am in the classroom and how I teach when I am there.

Forlizzi (CMU): I feel the program gave me critical thinking skills that I lacked in my former life as a communication designer. I approach design differently now... instead of just putting a 'face' on an idea, I try to make ideas and embodiment happen concurrently.

Hsu (SVA): The program had given me connections to top designers in the state and work under them, understanding (a non-stopping process) and creating new trends. Communicating with peers that are in the same areas. Through all these, I will always have a firm belief in my work.

Rodrigues (SVA): It's been a solid base of inspiration and expertise. And of course, my portfolio initiated my professional career in NYC.

Kiaer (IIT): I consider myself to be an information designer... because that is what I am concerned with—how to display or structure information that is easily and quickly understood. I apply graphic design principles to my work, but my skills and knowledge have broadened to include a larger context for understanding information. But as I mentioned above, the ID program greatly influenced the way I work today.

## 11. What suggestions do you have for schools that must address issues of technological change and increasing numbers of software programs?

Beckhofer-Fialho (U of A): It is too easy to fall for the never-ending quest to keep up with emerging technologies. What we have to keep in mind is that technology should never be placed at the forefront of any program. Better to have a solid curriculum which equips students with a depth of knowledge and understanding that promotes flexibility than to provide top-of-the-line equipment with no driving force behind it. Invest in people, not equipment.

Chow (U of A): It is a tough one to crack. I guess I will suggest two solutions, one for long term and the other for short term. In the long run, design schools have to reevaluate what their goals are and what type of designers they are preparing to deal with what type of design problems. In sum, design schools have to rethink and redefine 'design' and decide how design can and should function in relation to technological change. (This is a good thesis project.) For the short term, I would like to suggest treating computer skills as literacy skills. Like it or not, it is a medium like language that one has to learn and master in order to perform other tasks. So schools should introduce the software programs early on and let students become familiarized with them. My experiences tell me that once a person becomes literate in a couple of software programs, he/she can adapt to other software fairly easily. I wouldn't worry too much about students



being influenced by the ready-made-design, that a lot of graphic software has. I believe that once they get really skilled with the software, then they can really focus on being creative.

Strickler (U of A): Economy, discretion, specialization. Avoid fads and hire only excellent, up-to-date computer technicians who know what is going on in industry.

Littlejohn (CalArts): It should be the goal of the educational institution to provide the student with the conceptual framework for making meaningful design—it is up to the student to learn any software required to execute that work. However, the educational institution via its technical staff, needs to know what software/equipment is being used in practice.

Nikitas (CalArts): Offer several workshops that deal with programs and simultaneously run a seminar throughout the semester where projects are content driven not technologically driven. Leave the end product open but the process accessible.

Forlizzi (CMU): Not sure about this one! I feel as if students entering a graduate program should have basic proficiency in software skills, but I know that is exclusionary. I was a very skilled software user when I entered grad school. As of now (two years out), I haven't played with the latest versions of many applications, but that is of unimportance to my work. I work with a communications team to visualize and carry out my ideas.

Hsu (SVA): Because graphics are always based on technology and the future, understanding and providing new technology and programs are essential.

Rodrigues (SVA): Web design: Dreamweaver, Flash.

Kiaer (IIT): Technology is a means to an end. Unfortunately people often think technology is the end and so, get caught up in the whirlygigs and bells and whistles of what applications can do. Because Photoshop allows designers to alter images in bizarre and complex ways that was hard, if not impossible to do before the application existed, does this ability really enhance the message, make it stronger, allow the reader to "get it" more quickly?

I think that the rapid evolution and proliferation of technology means design schools will need to focus not just on technical skills but more on students' ability to make appropriate choices for technology use. Not every design solution is best addressed through technology. Then again, with future generations becoming much more visually sophisticated and media savvy, the choices designers make will have to be more sophisticated.

12. Please comment on the relative importance that your school placed on the following issues: authorship and entrepreneurial approaches, the designer's voice, traditional print media, new media including motion and sound, user needs, research-based design, and interdisciplinary processes.

Beckhofer-Fialho (U of A): As far as I can recall, in my experience, traditional print media was considered quite important, as was new media design. Jorge stressed the importance of user needs, research and interdisciplinary cooperation. As for authorship and entrepreneurial approaches, they did not feature prominently.

Chow (U of A): I would say that the University of Alberta focused on user-centered, research-based and interdisciplinary design.

Strickler (U of A): See above. Only the last three were relevant for my project. However, I have since had to learn web design and multi-media to stay current. I believe technical skills necessary for the workplace



should be taught at the undergraduate level. Programs need to be five years to accomplish this and programs should be selective and competitive, permitting only those students performing well to complete the program. Programs should not admit more students than they can professionally educate.

Littlejohn (CalArts): All of these topics were important and highly stressed at CalArts, particularly the designer's voice, authorship, and entrepreneurial approaches towards design. Although 'new' media was just beginning to be explored when I was there, I know that it is now a well-emphasized topic of discussion.

Nikitas (CalArts): I think that Calarts was at the forefront of most of the issues that you just mentioned and continues to be. I feel lucky to have gone there.

1=most important, 7=least stressed: 1. authorship & entrepreneurial approaches 2. the designer's voice 3. traditional print media 4. new media including motion & sound 5. user needs 6. research-based design 7. interdisciplinary processes.

Forlizzi (CMU): I think that our program stressed user-needs, user-centered design, and interdisciplinary processes. The clear mission of CMU design is to involve the user in all moments of the design process.

Hsu (SVA): From most to least important, as follows: traditional print media, the designer's voice, new media including motion and sound, user needs, research-based design, authorship and entrepreneurial approaches, interdisciplinary processes.

Rodrigues (SVA): During the year I was at SVA I found that there was a wide variety of courses being offered—students had the choice to specialize more or less in any of the above if they wished to.

Kiaer (IIT): I would say that the key focus of the Masters programs at the Institute of Design is understanding user needs through research (including observation), the ability to work within interdisciplinary teams, and exploring uses of technology to assist people in achieving a predetermined goal. The focus is less on entrepreneurship and authorship and more on increasing the body of knowledge of the design profession.

The voice of the designer is silent. The voice of the user is paramount. By examining what the user is unconsciously doing in order to negotiate his or her environment, leads to better understanding about what they are trying to do or would prefer to do. By focusing on design from this angle, the results are more likely to coincide with what the user wants and needs, and will therefore be more successful. It is this way with print media, or electronic media, or any kind of information that is being delivered.

### 13. How do you see graphic design expanding or changing in the future?

Beckhofer-Fialho (U of A): Hopefully, visual communication design will be less about "making things look pretty" and more about analyzing communication needs, evaluating the quality of the content, structuring the information and giving it an appropriate form to ensure successful communication. I also feel that it will be a less distinct field in that it will become part of other disciplines and complement them.

Chow (U of A): They say everything is changing and I agree but not all change is profound. I like to think change in design can be significant in the future if we prepare for it. What I am suggesting is, because of the rapid change in technology, especially information technology, graphic design can expand not only itself but also cause changes in technology if we educate our designers to do so. Design by essence bridges unfriendly technology (think about DOS) and people. I can see graphic designers being equal partners with other professionals in the development of technological products that hopefully serve human needs.



Strickler (U of A): I see visual communication becoming a component of virtually all human communication processes in the future. As demand and applications broaden, the profession needs to mature. Graphic design, meaning art posters and books, will still be around, and so will fashion and advertising, but I believe the most pressing need in design education is to introduce a doctoral level beyond the masters, so that all levels of design education become more rigorous and genuinely take into account expanding bodies of knowledge, especially in areas that border or comprise information design.

Littlejohn (CalArts): I see designers as becoming more collaborative and team-oriented with colleagues from related disciplines, especially those designers who study interactive media design, because some of the expertise required in interactive media design (sound design, user-based design methodologies, and film editing are disciplines in their own right with separate concerns and expertise) are beyond the scope of what can be accomplished in a traditional four-year/two-year design education.

Nikitas (CalArts): There will be more and more collaboration with people outside of the design profession such as film makers, video makers, sociologists, etc. more designers will continue to pursue independent studios, technology will continue to blow our visual surroundings away but the content will remain in question. Hopefully designers will play a role in seeing that the world stay livable, sane and interesting and engaging.

Forlizzi (CMU): Graphic design as a discipline is becoming more complex—it has to deal with new media, and new kinds of delivery of messages.

Hsu (SVA): Graphic design in my opinion is the basis of most design. If we do not have a solid foundation of two-dimensional design, how could 3D design be possible? Graphic design is a way to improve our living, for example better and easier communicating products, user-friendlier environments.

Rodrigues (SVA): As a visual language it can function as a bridge between different countries, continents and cultures, especially in a time when the world wide web continues to bring us closer than ever before.

Kiaer (IIT): I think the graphic design field will be challenged in several ways. Desktop publishing is already challenging the validity and relevancy of graphic design because, by what it affords one to do, it shortens the distance between the educated and the uneducated designer. Who needs rules, or design principles?

The craft and discipline of the field is being pushed in different directions. When I was in undergraduate school, I had a typography course where I spent a semester learning letterforms through rigorous practice in hand lettering. This appreciation and discipline for the craft seems to be losing importance. Technology allows us to access tools and to create messages faster, and cheaper. But is it always better? There are philosophical issues on the table here. Graphic design is already moving into new arenas with the emergence of electronic media. The interesting thing I find though, is that most Web design looks like page design, when in fact the electronic world is not two-dimensional at all.

Design education is not all that old. It has met the challenges of the times well, since we continue to have design schools and people still find it a relevant field to pursue. I think the field will expand, is already expanding, to include a broader interpretation of itself. With the proliferation of information that we are required to process in our increasingly busy world, how does anyone make choices for which information to take in, which to ignore, and how to make sense of any of it? I think there are as yet undiscovered directions for the graphic design field to expand into as the ordering and sense-making of information becomes more critical. The way in which this is done and the focus may be different than what is currently taught, but the outcome is still about communication and helping others negotiate an increasingly complicated world.



## CHAPTER 6

### COMPARATIVE ANALYSIS: CURRENT ISSUES IN VISUAL COMMUNICATION DESIGN EDUCATION

#### Factors to be compared:

*Curriculum flexibility: Refers to the sequential rigidity of the curriculum, namely the degree of flexibility that students have to select courses and options that suit their own personal interests in specific areas of design.*

*Structured options: The potential for students to select a course of study in a particular branch of design, with curriculum allowance for a range of elective course selections within the boundaries of the specialty program.*

*Interdisciplinarity: The amount of emphasis placed on including knowledge from fields of study outside design, namely collaboration with other departments whose expertise contributes to the design process.*

*Motion and sound: Refers to the degree of curricular weight placed on the learning of skills related to new media, and the incorporation of dimensions of motion and sound. Areas of application include animation, film and television, and Internet and web-based projects.*

*Traditional technology: Non-computer based methods for generating visual communication. Includes studies in drawing and rendering, traditional photography and darkroom skills, and the development of manual technical proficiency in areas such as typography.*

*New technology: A measure of the degree of the use of computers as production tools and as media. Courses require skill development in current software programs and various digital platforms in image and text generation/manipulation.*

*Authorship/personal voice: An approach to design that promotes the graphic designer as artist. The development of a personal style is encouraged in content creation.*

*User/audience needs: Refers to the degree to which the design curriculum promotes the addressing of audience or user needs in the creation of visual communications. The goal is to incorporate an understanding of human factors in the establishment of design criteria, thereby promoting responsible and successful solutions.*

*Entrepreneurship: Refers to the notion that designers take a central role in the invention and development of products intended for mass consumption. Business-related studies include marketing and project management.*

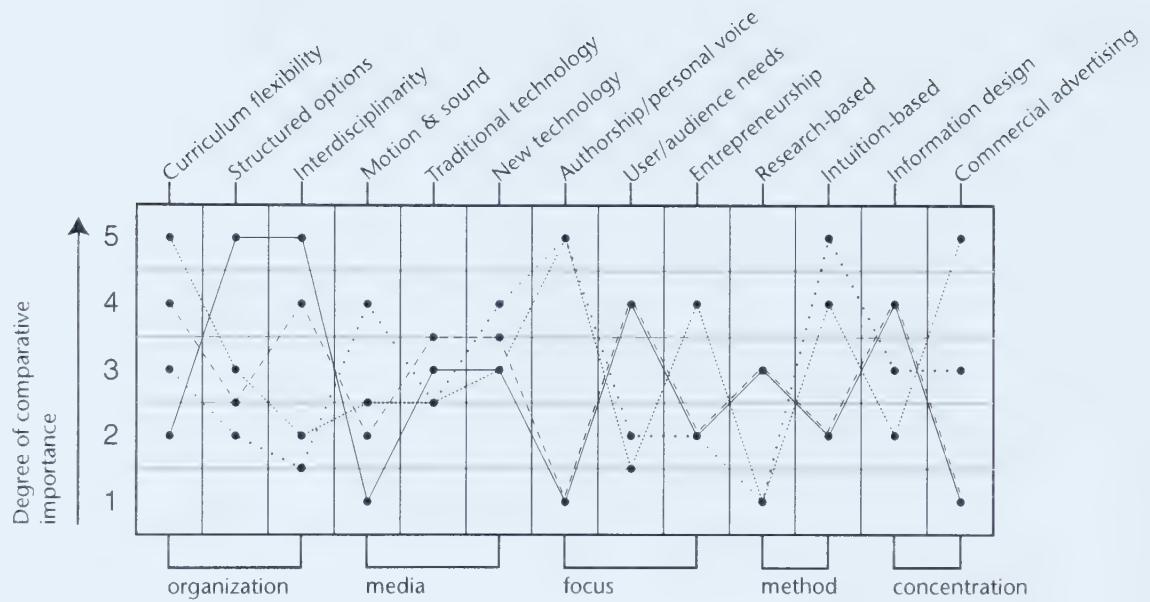
*Research-based: Design curricula which includes research methodology in the design process, to further the design student's knowledge of given phenomena related to a specific project. Research findings assist in the shaping and evaluation of end products.*

*Intuition-based: Course development that emphasizes that which is emotive, intuitive, and expressive in the design process. The designer's personal experience and artistic interpretation of a visual problem shapes the creation of graphic communication.*

*Information design: Visual communication design that facilitates the sharing of information through the organization and presentation of images and text. Includes the design of books and educational materials.*

*Commercial advertising: Client and market-driven graphic design that is concerned with persuasion, and aims to sell a particular product or service to a target audience. Financial gain is the primary objective.*



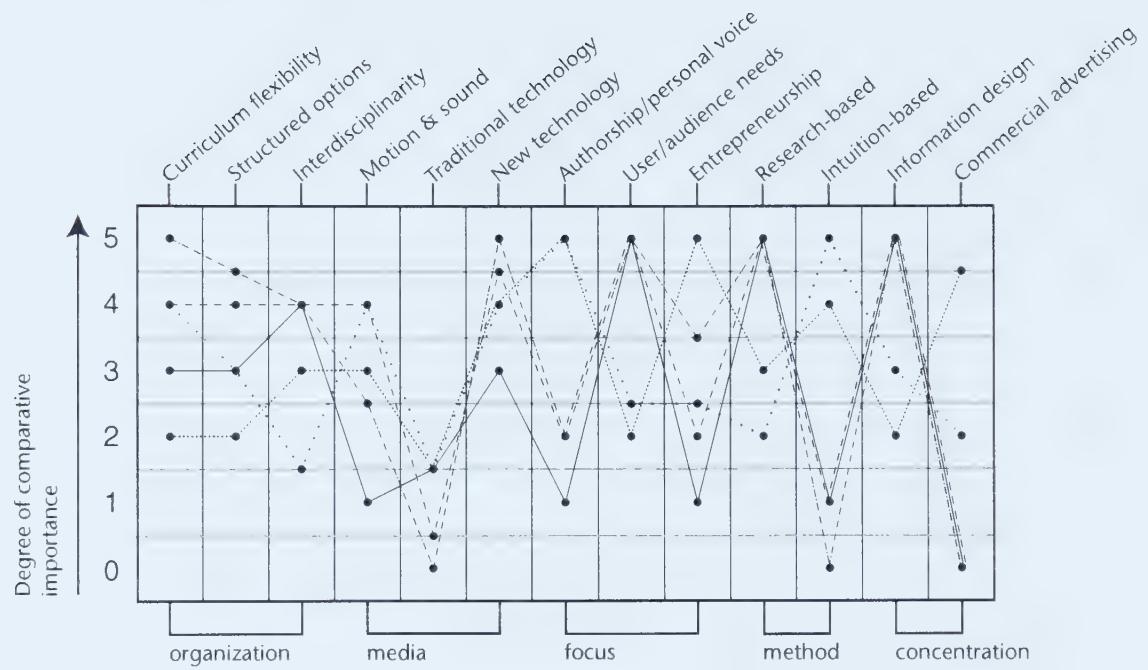


**Figure 1: Comparative analysis of undergraduate programs**

**Key:**

- University of Alberta
- California Institute of the Arts
- - - Carnegie Mellon University
- School of Visual Arts



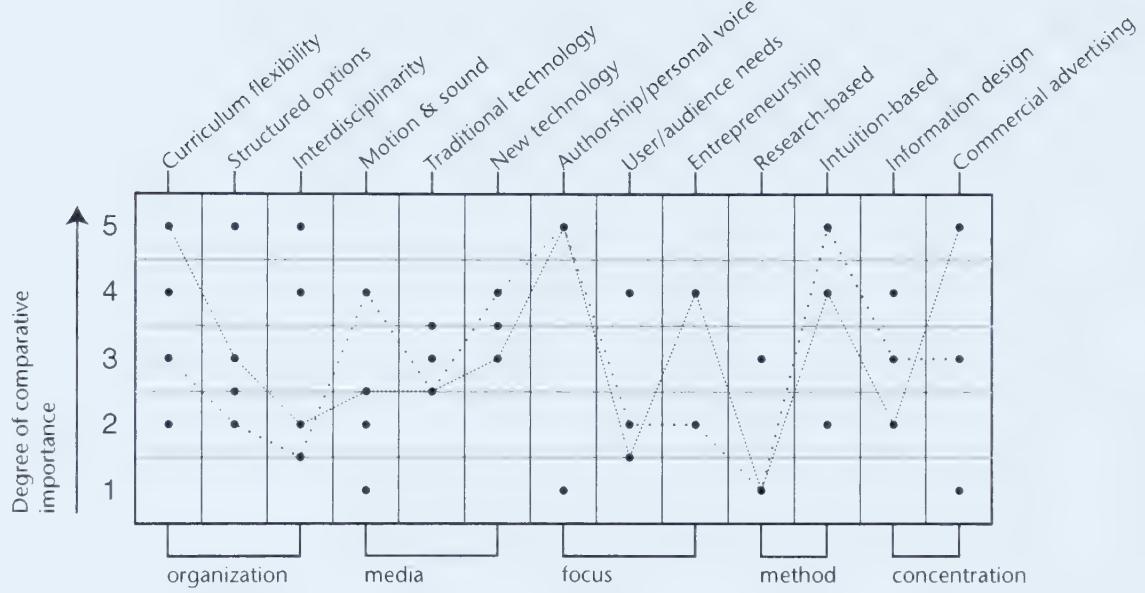


**Figure 2: Comparative analysis of graduate programs**

**Key:**

- University of Alberta
- .... California Institute of the Arts
- - - Carnegie Mellon University
- ..... School of Visual Arts
- Illinois Institute of Technology





**Figure 3A: The School of Visual Arts & California Institute of the Arts Undergraduate programs**

**Key:**

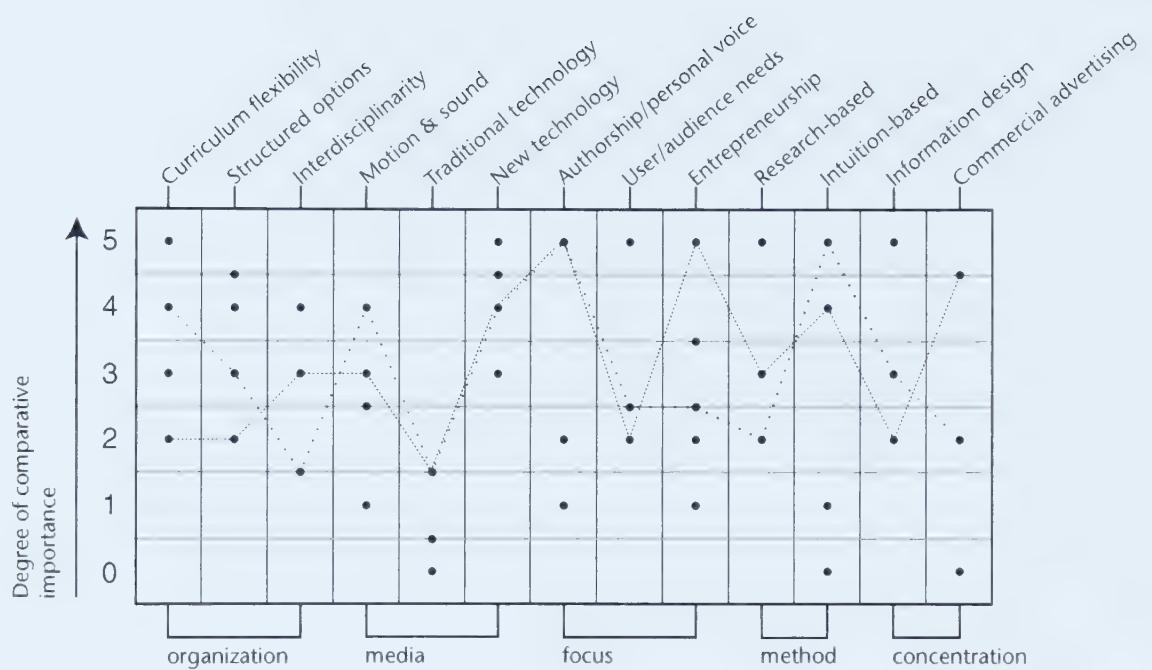
..... California Institute of the Arts

..... School of Visual Arts

*Note: Points not connected are included in reference to the three schools not compared in this graph.*

*The intent is to emphasize the similarities between the two institutions featured*





**Figure 3B: The School of Visual Arts & California Institute of the Arts Graduate programs**

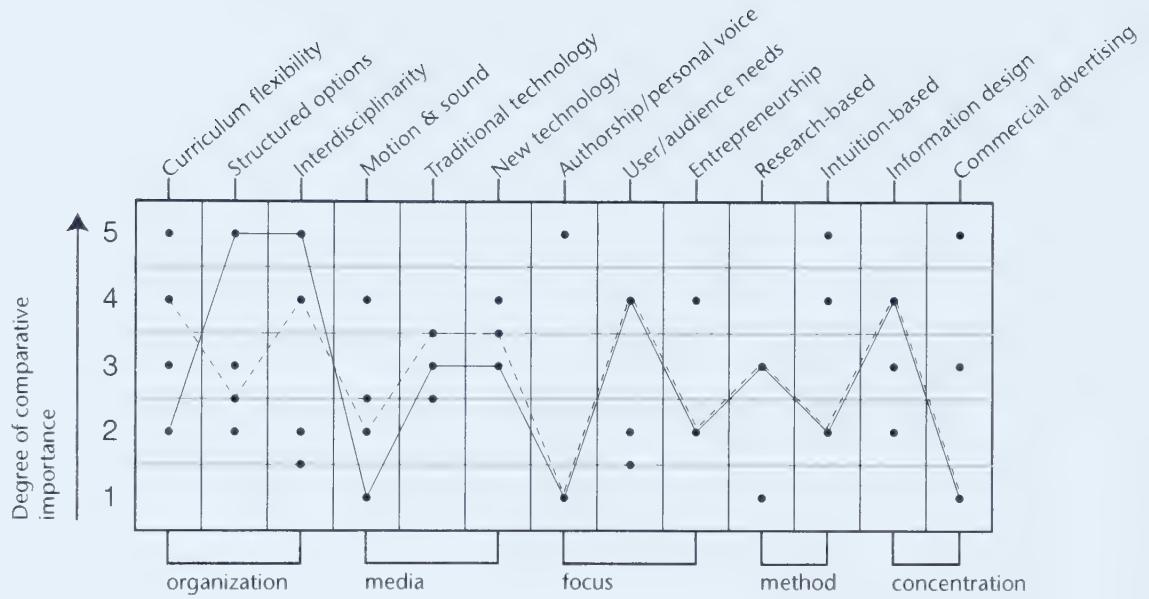
**Key:**

····· California Institute of the Arts

······ School of Visual Arts

*Note: Points not connected are included in reference to the three schools not compared in this graph.  
The intent is to emphasize the similarities between the two institutions featured*





**Figure 4A: University of Alberta & Carnegie Mellon University Undergraduate programs**

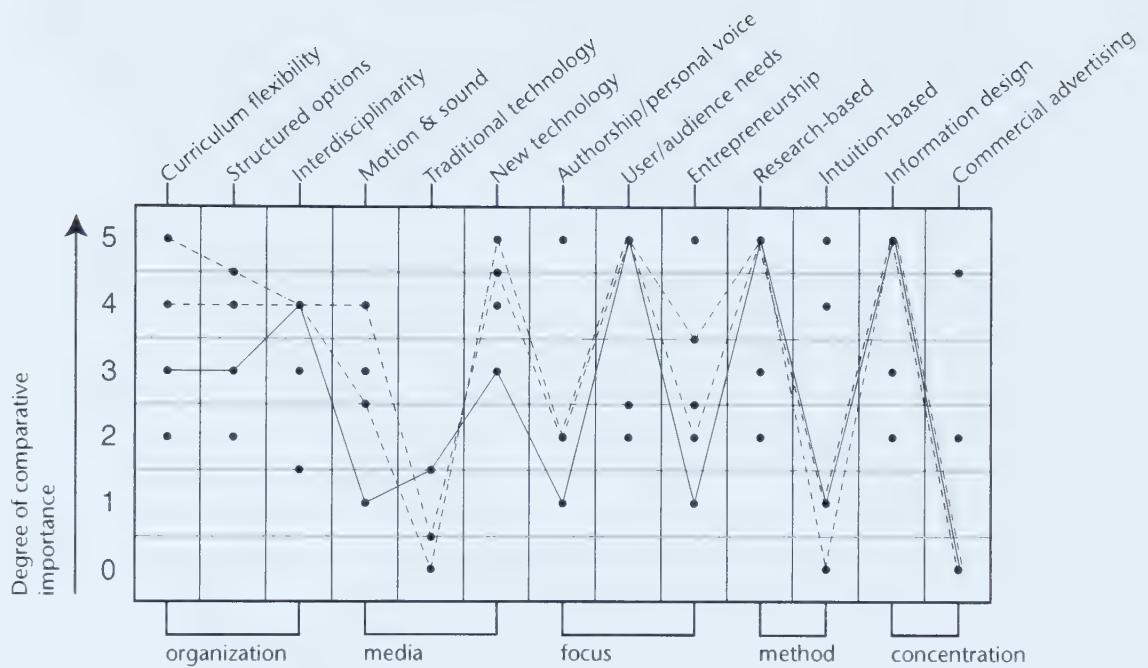
**Key:**

— University of Alberta

- - - Carnegie Mellon University

*Note: Points not connected are included in reference to the three schools not compared in this graph  
 The intent is to emphasize the similarities between the two institutions featured.*





**Figure 4B: University of Alberta, Carnegie Mellon University & Illinois Institute of Technology Graduate programs**

**Key:**

— University of Alberta

- - - Carnegie Mellon University

- - - Illinois Institute of Technology

*Note: Points not connected are included in reference to the two schools not compared in this graph  
 The intent is to emphasize the similarities between the three institutions featured*



## COMPARATIVE ANALYSIS: CURRENT ISSUES IN VISUAL COMMUNICATION DESIGN EDUCATION

*Curriculum flexibility:* Refers to the sequential rigidity of the curriculum, namely the degree of flexibility that students have to select courses and options that suit their own personal interests in specific areas of design.

University of Alberta: The Bachelor of Design program offers a limited number of courses in visual communication design studio: namely only three mandatory six-credit courses (one at each level), and nine three-credit courses that students may take toward fulfilling the degree requirements. In the general route, there are many options to choose from, including courses offered by the Faculty of Arts and the Faculty of Science. Occasionally, students choose to take some of their design studio requirements in Industrial Design. Compared to the other schools, however, visual communication design studio options are at a low level in number. Flexibility in this program is present in the *Pathways System*: each pathway is very structured, but a student entering the program may choose from five optional streams (Computer Science, Business & Marketing, Social Sciences, Printmaking or the main stream).

At the graduate level, flexibility is most evident in the second year of the program, at which time the thesis research project is completed. The required courses of the first year are tightly structured, although there is some flexibility within the primary studio courses to explore individual areas of interest. Three credits are allotted to an elective class. Students are encouraged to choose an option that complements their intended area of thesis research, or use the selection to study a topic that is otherwise of personal interest. During the duration of the thesis project, students exercise a considerable degree of freedom in a self-directed course of study. Under the direction of a thesis advisor, MDes candidates formulate a thesis topic, the completion of which requires a unique investigative directive into areas and disciplines that contribute to the learning process.

California Institute of the Arts: The BFA program at CalArts provides students with a considerable degree of flexibility in course offerings. Although the first two years are fairly rigid in structure (providing foundations in studio, theory, photography, and the Macintosh platform), the third and fourth years of study provide a variety of Graphic Design electives. Undergraduate program options include studies in multimedia, motion graphics, digital type design, information design, publication design, and 'mutant design', which deals with exhibition as interface. Students are required to complete electives in the Division of Critical Studies, which aims to broaden general knowledge through studies in the humanities and social and natural sciences. Courses in art and design history are included in this division.

The graduate program in Graphic Design involves the completion of a senior project, the subject of which is determined by the student. In comparison to other programs, the senior project does not comprise the majority of advanced study credits. Rather, the senior project is, in the second year, complemented by required courses in theory and departmental electives. As in the undergraduate program, the MFA in Graphic Design provides students with the opportunity to complete electives in specific areas of visual communication design (such as *Motion Graphics*, *Information Design*, and *Digital Type Design*), thereby incorporating flexibility in the student experience as dependent on individual interest.

Carnegie Mellon University: Carnegie Mellon's undergraduate program in Communication Design provides students with a wide array of departmental and general education electives. In the second through fourth years of degree study, undergraduates select an average of four elective courses per semester. Half are from courses within the department, and include specialized studios such as: *Photography*, *Calligraphy*, *Signs, Symbols, and Marks*; *Moving Images*, *Packaging*, *Interaction and Visual Interface*, *Letterpress*, and *Time and Motion*. Students are given the opportunity to select sequences of introductory and advanced level courses that meet their particular interests in the field of visual communications. The remaining half of elective study weight is devoted to courses outside the Department of Design, taking advantage of the broad variety of departments and disciplines that are part of the Carnegie Mellon campus.



The considerable degree of program flexibility is carried through the Masters degrees at CMU. In the MDes (Interaction Design) program, students select elective courses from the Design Department and/or other departments and schools in order to facilitate an individualized program of study. Approximately four elective courses complement the completion of the thesis project in the final year. The MA in Communication Planning and Design has an even greater degree of flexibility, with approximately eight elective courses throughout the two-year sequence. At CMU, the graduate electives are referred to as *Ideas and Methods Courses*, which are designed to provide curricular support of specialized studies.

**School of Visual Arts:** In comparison with the other four undergraduate programs in visual communication design, the School of Visual Arts offers the highest degree of flexibility in its curriculum structure. Students in both the Advertising and Graphic Design programs have an incredible selection of both studio and non-studio-based electives to choose from. The third and fourth years are comprised almost entirely of elective selections. The only exceptions are: *Communication/Graphic Design* (or *Advanced Advertising* for Advertising majors) in the third year, and the required portfolio course in the senior year. All other credits completed are those selected by students. Individualized sequences of study are supported by a multitude of options such as: *Experimental Book Art, Toys and Games, 3-D Design and Illustration, Corporate Identity, Graphic Design for Television, Poster Design, CD Package Design, Editorial Design, New Media Design, Graphic Design for the Internet, and Advertising/Art Direction*.

The new MFA Design program at SVA offers a limited amount of flexibility to students, in terms of the number and variety of studio and elective courses available. However, there is an individualization of the learning process in terms of the ability of students to choose their own topics in many of the studio-based courses. The thesis project, which constitutes nine - twelve credit hours in the 30 credit final year, is devised by the MFA candidates and developed under the direction of an advisor. Input is also offered by a select group of NYC professionals who are active and successful in the student's particular area of interest.

**Illinois Institute of Technology:** The Institute of Design at Illinois Institute of Technology offers the highest degree of flexibility of the five graduate programs compared (with IIT housing the only PhD program within the spectrum of analysis). The Master of Design, which has three areas of specialization (i.e. Design Planning, Photography, and Human-Centered Design, with emphasis in Communication or Product design), is a program that offers a tremendous amount of freedom in its curriculum structure. The two-year graduate degree requires the completion of 64 credit hours of coursework, half of which are designated as professional sequence workshops and specialty courses. Such classes are courses in special branches of design theory, process, or practice. These are primarily half-semester courses, with a credit weight of 1.5. The diverse number of specialty classes is intended to meet the objectives of the students' professional goals, and include such courses as: *Communication Planning, Technological Development and Design Innovation, Design Planning, Information Structuring, Computer-Supported Design Processes, Form-Generation Processes*, and the list goes on... In addition to the specialty courses, degree completion requires that students take a series of elective courses (10 credit hours in total) outside of the department. These course selections further complement the aims of the individual student programs.

The Master of Science degree, a one-year program offered as a preparatory route for prospective PhD students who are lacking a comprehensive design background, is less flexible in comparison to the MDes routes. Specialty courses (generally the same as those available to MDes students) comprise eight of the total 32 credits. This primary emphasis of the year of study is on the core courses (*Value, Form, Structure, and Image*) and on the demonstration of an understanding of research methodology and philosophy (including the completion of a thesis project). The PhD program in Design requires the completion of 21 credits of specialty courses and 12 credit hours of electives. Again, these courses provide for an individualized course of study in conjunction with the PhD dissertation. With few exceptions, PhD candidates choose from the same list of workshops and specialty courses offered to the Masters students. The



elective credits are selected from departments outside of the Institute of Design. For further details on curriculum structure and individual courses, please see the program charts in Section 2, and course descriptions in Appendix E.

*Structured options: The potential for students to select a course of study in a particular branch of design, with curriculum allowance for a range of elective course selections within the boundaries of the specialty program.*

University of Alberta: The Bachelor of Design program at the University of Alberta offers five different pathways for students majoring in Visual Communication Design. The *Pathways System* was developed in response to the notion that design disciplines (such as graphic design and industrial design) have become increasingly interdisciplinary, and such disciplines would benefit from collaborative educational processes that facilitate the sharing of knowledge and processes traditionally possessed by specific non-design fields of study. Students in the undergraduate Visual Communication Design program may choose one of five routes of study: General (or main stream), Printmaking, Computer Science, Business and Marketing, and Social Sciences. Each pathway is structured to allow for the integration of courses outside of the Department of Art and Design. General electives take on a more specific form in the pathways, either as required courses in the other disciplines, or as electives open to selection within a particular discipline or field of inquiry. The aim is to graduate students equipped with the skills necessary to work in the increasingly complex (and, more and more, less rigidly defined) field of visual communications.

The MDes degree in Visual Communication Design does not offer a series of elective offerings. Three credit hours are allotted to an elective course in the first year. However, the program allows students to adopt their own course of study through the completion of the thesis project, which requires a minimum of 31 credit hours. The independent nature of the major research study allows students to pursue a unique course of self-directed investigation into selected topics. In this way, there is provision for a wide range of specialty topics and individualized research strategies.

California Institute of the Arts: The undergraduate program at CalArts does not offer specialty routes of study, although there is some provision for individual selection of elective courses via various studio-based electives. These electives allow students to learn about various specialty areas in Graphic Design, such as *Motion Graphics*, *Information Design* and *Publication Design*. The same is true for the MFA program in Graphic Design. There is, however, an increased allowance for self-directed, individualized study during the completion of the senior project, although the project comprises only a portion of the total credits required to complete the degree.

Carnegie Mellon University: The BFA curriculum does not offer structured, pre-determined program streams within its Communication Design program. However, as mentioned previously in regard to flexibility, there is considerable freedom granted to students in the selection of both program and general education electives. In this way, students might focus on a particular area of design through their selection of electives.

Graduate studies in the area of Communication Design allow for two very different specialty degrees: The MDes in Interaction Design, and the MA in Communication Planning and Design. Furthermore, the MDes program divides into two areas of focus: Human-Computer Interface Design, and Human-Machine Interaction Design. Although these two streams share many courses of instruction, each entails courses that are structured specifically for the major area of study. As well, there is provision for the completion of electives selected to complement study in the chosen branch of design. The MA in Communication Planning and Design is a degree oriented towards the combination of expertise in both visual representation and writing. Through the completion of a thesis, and the selection of a variety of elective classes in Communication Design, English, and other departments, the program meets the needs and interests of individual students. Although the graduate programs mentioned are uniquely designed to provide a specialized design focus, there is a great degree of freedom in the selection of electives.



School of Visual Arts: The School of Visual Arts offers programs in both Graphic Design and Advertising. The first two years of study are shared. The tight foundation structure emphasizes the fundamentals of art and design. In the third year, students elect to major in either Graphic Design or Advertising. The final two years of study involves the completion of studio and portfolio courses specifically designed for the specialty areas. All other courses are in the form of electives that students select to further their education in distinct areas of interest within their majors. Although the electives are not structured to include required selections (as is the case with the University of Alberta's *Pathways* curriculum), the options allowed by each major result in a comprehensive education in the selected area of concentration. The undergraduate program at SVA is the only program among the five investigated to provide a major in the field of Advertising.

At SVA, graduate studies in Design entail a fairly tight structuring of courses. The program focuses on authorship and entrepreneurial approaches to visual communications, and course offerings reflect this specialization. The program, at present, does not provide additional electives outside of the department to complement the course of study. Students do, however have the ability to tailor their educational experience via their selection of studio projects (and, in particular, the thesis project). Individual interests are also realized in student approaches to gaining background information and industry input into design processes and outcomes.

Illinois Institute of Technology: Of the five graduate-level programs, the Institute of Design provides the highest number of structured options. Graduate degrees include: the MDes in Design Planning, MDes in Human-Centered Design (with emphasis on either Communication Design or Product Design), MDes in Photography, MS in Design, and PhD in Design. Students enrolled in each of these programs are able to devise a sequence of study that is tailored to their specific area of interest. The incredible number of professional sequence workshops and specialty courses makes this possible in each of the degree programs. Other departments throughout the IIT university campus provide a multitude of courses to further complement individual interests.

*Interdisciplinarity: The amount of emphasis placed on including knowledge from fields of study outside design, namely collaboration with other departments whose expertise contributes to the design process.*

University of Alberta: The University of Alberta's *Pathways System* is based upon the notion of interdisciplinarity. The combining of visual communication design classes with select courses in various departments throughout the university facilitates a broadening of knowledge in regard to processes, research methodology and theory. The five pathways available to undergraduate students are: General Route, Printmaking, Computer Science, Business and Marketing, and Social Sciences. Students are required to take specific courses outside of visual communication design in their particular area of interest. In some cases, students are given a limited number of options that they may select from. Generally, the required non-departmental courses fill the credits normally allotted to open electives (as in the main stream).

Students opting for the *Printmaking Pathway* gain experience with the art and craft of printmaking, facilitating the creative application of such processes and aesthetics in their Graphic Design work. The *Pathway in Computer Science* is geared towards those interested in gaining a knowledge of digital languages and technological advances in computer graphics. The curriculum provides a venue for experimentation with the creation of design-related programs and successful interface development. The *Business and Marketing Pathway* aims to graduate professionals who are familiar with corporate organization and procedures, marketing strategies and consumer behavior. The newest addition to the *Pathways Program*, the Social Sciences route, takes advantage of the knowledge and resources available via connections with the Departments of Anthropology, Psychology, and Sociology. The interdisciplinary stream involves the adaptation of research methodologies and application of user-centered processes based on human, social and cultural factors.



Interdisciplinary processes represent a vital component of the graduate program in Visual Communication Design. The major thesis completed by MDes candidates is research-based, and in most cases, requires the successful completion of both written and graphic components. Students devise and develop a major project, the completion of which requires research and investigation outside the confines of the department. Research directives are determined by the individual topics of study, and might include interaction with faculty from the fields of cognitive psychology, behavioral sciences, education, computer science, or law. Often, students initiate contact with relevant and valuable contacts and resources from outside of the university, or in some cases, outside of the country.

**California Institute of the Arts:** At CalArts, in both the undergraduate and graduate programs in Graphic Design, interdisciplinary procedure is rather limited. Although the institution was built with the idea that artists and designers would work alongside one another in an interdisciplinary environment, this has only been partly realized. Without question, students benefit from constant exposure to exhibitions and performances put on by the other creative disciplines that are part of the CalArts community. Additionally, CalArts provides some courses that are interdisciplinary in nature, with the aim of encouraging various art and design disciplines to collaborate on projects. However, as explained by a co-director of the program, students tend to stay close to their own domains, and interdisciplinary activity isn't as prominent as it might be.<sup>1</sup> Being a private art institution, the school does not have the expanse of resources that various departments at a major university might have.<sup>2</sup> However, the Division of Critical Studies at California Institute of the Arts aims to assist in the broadening of the educational experience through course offerings in the Humanities and the Natural and Social Sciences. The weight of curricular emphasis given to such courses is light in comparison to other schools.

**Carnegie Mellon University:** The undergraduate program in Communication Design at CMU requires that, in each of the four years, students complete courses outside of the department. *English Composition*, *World History*, and *Introductory Psychology* must be completed in the freshman year. In the second through fourth years, students must select between three and four courses from other fields of study. These classes comprise the General Education component of the curriculum. Interdisciplinary studies broaden the student experience and form an important component of CMU's undergraduate curriculum.

At the graduate level, interdisciplinary study is a critical component of the department's approach to design education. The MDes program, which provides majors in Human-Computer Interface Design and Human-Machine Interaction Design, requires that students complete elective courses, either in the Design Department or in other departments and schools. The *Ideas and Methods* courses comprise a significant portion of curricular weight and allow students to devise an individualized program of study. The MA in Communication Planning and Design is an excellent example of interdisciplinarity at the graduate level. The Masters degree is offered jointly by the Departments of Design and English. Elective courses are completed in both departments, as well as in other departments and schools. The purpose of the program is to draw upon the expertise and resources of each discipline (Communication Design and English) to empower students with the skills to successfully orchestrate projects that deal with the complex integration of visual and written components in the communication of messages and information.

**School of Visual Arts:** Interdisciplinary approaches do not play a particularly important role in the education of undergraduate students at the School of Visual Arts. However, the art department plays a central part in educating first year students in the fundamentals of art and design. The foundation year requires that students complete courses in *Painting and Colour*, *Drawing*, *Sculpture* and *Art History*. Additionally, first year students must complete two three-credit courses in *Literature and Writing*.

The MFA Design program does incorporate some components of interdisciplinary study, although the majority of credit weight is assigned to design-specific education. The notion of the designer as author and entrepreneur involves a greater involvement of the designer in non-production-oriented aspects of



the field. This broadens the scope and influence of the designer's work, and facilitates exchange and collaboration with other areas of expertise. The first year course entitled *Crossing Disciplines: Expanding Design Media*, explores the multidisciplinary nature of design for electronic media. *The Integrated Studio* is a course that aims to model and test, through prototypes, the "integrated studio of tomorrow," a studio in which the traditional boundaries between fields fade. Disciplines include Graphic Design, Video, Photography, Architecture, Illustration, and Animation. Hybrid skills, i.e. those that transcend design, communication, and production,<sup>2</sup> are emphasized.

**Illinois Institute of Technology:** At the Institute of Design, interdisciplinary measures play an important role in the creative processes of invention and innovation. Each graduate degree (i.e. MDes, MS, and PhD) requires the completion of elective courses that are selected from the university's course offerings. The intent is to provide a route by which students may complement the objectives of their programs. In the two-year MDes degrees in Design Planning, Human-Centered Design and Photography, ten of the 64 total credits must be taken outside of the department. The one-year, 32 credit-hour Master of Science in Design requires that nine credits be completed, at the 400 level or higher, outside of the department. The PhD in Design also has a non-departmental elective requirement (twelve credit hours). Being a large university campus, IIT is able to offer its students a tremendous number and diverse selection of courses. Communication Design majors (the major is offered by the Master of Design program in Human-Centered Design), are able to take advantage of interdisciplinary benefit through the extensive campus resources.

*Motion and sound:* Refers to the degree of curricular weight placed on the learning of skills related to new media, and the incorporation of dimensions of motion and sound. Areas of application include animation, film and television, and Internet and web-based projects.

**University of Alberta:** Although the Department of Art and Design at the University of Alberta does offer some courses in the area of new media, these courses are limited in number and introductory in scope. Undergraduates in the Bachelor of Design program are offered two studio options in new media: *Communication Design for Interactive Media I*, which deals with the development of design projects using Director, and *Communication Design for Interactive Media II*, a class that teaches students the processes and techniques involved in Internet and web-based design. These courses are offered exclusively to senior-level students. The dimensions of motion and sound do not play a part in years one to three of the undergraduate program, as visual communication design studios deal primarily with print media.

As at the undergraduate level, the integration of motion and sound in design projects at the Masters level is minimal. However, students who are interested in new media are encouraged to engage in self-directed study that makes use of departmental resources, such as technicians and undergraduate faculty who are well-versed in the application of dimensions of motion and sound and required technical skills. The graduate computer stations offer up-to-date software programs. The department is currently looking to hire a design educator who is experienced with new media processes and applications, to further accommodate student interests. Those graduates who have completed thesis topics related to new-media have generally engaged in independent learning of software programs, or come to the program already equipped with such skills.

**California Institute of the Arts:** At CalArts, new media is a central component of the educational experience. Throughout the undergraduate years, students experiment with dimensions of motion and sound. Educators there have found that, more and more, graduates are obtaining jobs in fields related to new media.<sup>3</sup> This is especially true of the Los Angeles area, where the film and television industry is dominant. In Internet and web-based courses, there is an interest in narrative structures and their transformation in new media. Studies in digital typography encourage experimentation with text in three-dimensional space. The Graphic Design department employs several instructors who specialize in new media. The program has responded to changes in the visual domain, which has increasingly included motion and



sound. Second-year studio requires that students produce animated sequences to complement two-dimensional studies in print media. Second and third year students are able to gain further experience in new media via options that include: *Motion Graphics*, *Mutant Design*, and *Mac Specialist Workshops*, which offer instruction in various software programs. New media is equally important at the graduate level. Students in the MFA Graphic Design program have access to expert instructors and technical support. First year grad students lacking experience with new media are encouraged to take *Beginning Multi-Media*. The same variety of electives available to undergraduates (i.e. courses including those that support experimentation with motion and sound) are also available to MFA candidates.

**Carnegie Mellon University:** Carnegie Mellon's BFA in Communication Design offers students a limited number of courses which deal with motion and sound. These departmental electives are: *Moving Images and Meaning* and *Time, Motion, and Meaning*. The two courses are offered in the first and fourth years, respectively. Although these courses are offered, the notion of motion and sound receives comparatively minor emphasis throughout the program.

Motion and sound, as aspects of new media, represent the primary area of focus in the MDes Interaction Design program at CMU. Both the Human-Computer Interface Design and Human-Machine Interaction Design streams are composed of seminars, studios, and ideas and methods courses that support an education in how to design successful new media projects—projects that address and respond to issues and potentialities of motion and sound. Required courses include *Visual Interface Design* and *On-line information*. The MDes in Interaction Design is specifically gear toward students interested in pursuing advanced studies in new media. The program is unique in its specialized approach, and includes exploration in the areas of information design, navigation design, user-centered interactivity, three-dimensional animation and digital video. The MA degree in Communication Planning and Design attributes importance to new media investigations that deal with narrative configurations, and the character of integrated text, image, motion, and sound in three-dimensional information environments.

**School of Visual Arts:** The BFA programs in Graphic Design and Advertising offer a vast array of elective courses at the third and fourth-year levels. Among the classes that students select from are several courses that deal with new media. One such course is *Graphic Design for Television*, which focuses on learning to design with form, colour, motion, and audio. The differences between designing for print and for television broadcast are investigated. There are two courses offered to senior students that deal with motion and sound: *New Media Design* and *Graphic Design for the Internet*. The first explores new medium such as information kiosks, computer and TV screens, CD-ROMs, and Internet Web pages. The second course deals exclusively with interactive media in relation to the Internet. Although new media courses are provided as a means of learning about design with motion and sound, new media is not an exceptionally dominant theme in the undergraduate program at the School of Visual Arts.

The MFA Design program also offers several courses that deal with new media. The dimensions of motion and sound may be explored in courses such as *Crossing Disciplines: Expanding the Design Media* and *The Integrated Studio*, and via individual thesis projects. *Filling the Screen: The Theory and Practice of Interactivity* is offered during the first year of study. This course deals specifically with the formal process of designing for interactive multimedia, and includes the study of human factors, linguistic implications, cognitive and sensory perception, systems and information theory, and the restraints posed by both hardware and software.

**Illinois Institute of Technology:** Currently, motion and sound play a marginal role in the graduate student experience at the Institute of Design, unless chosen as an area of thesis enquiry. New media is studied as an area of theoretical inquiry, as well as explored and tested as a vehicle for design innovation and technological advancement. Specialty courses are offered in the areas of *Interface Design*, *Interactive Media*, and *Computer-Supported Design Processes*. Emphasis is placed on user-computer interface design, and includes the study of topics such as cognitive models, interactive techniques, sign systems, display organi-



zation, and prototyping methods.<sup>4</sup> In the area of interactive media, students are taught successful methods of integrating computer graphics, electronic publishing and interactive video, while demonstrating sensitivity to human factors.

*Traditional technology: Non-computer based methods for generating visual communication. Includes studies in drawing and rendering, traditional photography and darkroom skills, and the development of manual technical proficiency in areas such as typography.*

University of Alberta: The U of A's BDes program utilizes traditional technology in the teaching of foundation skills necessary in visual communications. In the first and second years, students complete two three-credit classes in drawing. The first year studio involves the completion of twelve credits in *Visual Fundamentals*, an art course that uses traditional medium such as pencil, paint, and collage in the exploration of the elements and principles of design. The second year studios focus primarily on traditional technology, including manual typography skills, non-digital photography and darkroom procedures. It is required that students demonstrate aptitude in these areas before moving on to computer-generated work. In the third year, an introduction to basic Macintosh skills is taught. The digital platform is viewed as a toolbox which students use in combination with traditional communication methods within the design process. Traditional methodology is of particular importance for students who select the *Printmaking Route* of the Department of Art and Design's *Pathways System*. Students complete a series of courses offered by the Printmaking area, which facilitates the integration of learned methodology and aesthetic quality in communication design projects. Within the graduate curriculum in Visual Communication Design, the teaching of traditional methodology is a non-issue, as it is expected that students at this level come to the program with advanced skills in non-digital communication. This is also true of the other four graduate programs examined in this study.

California Institute of the Arts: The Graphic Design program at CalArts combines the study of traditional and new technology throughout the four year BFA degree. During the freshman year, manual skills for visualization are taught, which include sketching, perspective, and the technical application of art and design tools. Introductory studies in typography cover traditional topics such as calligraphy, metal type, and letterform construction. Intermediate, senior, and graduate level project development in Graphic Design involves the integration of traditional methodology and aesthetics. However, the technological focus is largely on new media skills and application.

Carnegie Mellon University: Like the other programs discussed, CMU requires that undergraduates demonstrate proficiency in drawing as a means of communicating design thinking. First-year students complete two *Ideas and Methods* courses entitled *Design Drawing I* and *II*. Through various drawing media, students learn to work with line, tone, and texture. Drawing is taught as a method of representation, communication, idea generation, and form development.<sup>5</sup> Systems of perspective and diagramming in the communication of information are taught in the advanced class, which is a required course. Traditional technology is further explored in the areas of *Photography in Design*, *Communication Design Darkroom*, and *Typography*. Traditional image-making methodology requires that students develop a heightened sense of what is seen in the world around them. In the *Basic Typography* class, traditional materials and design tools are utilized in conjunction with computer software. Once the fundamentals are covered, traditional and new technologies are combined in the process of creating communication projects that integrate image and text.

Unique to CMU is its series of elective calligraphy courses. Calligraphy classes require skill development in hand-generated letterforms, using mark-making tools. The inclusion of calligraphy in the curriculum aims to generate design thinking that uses both the hands and eyes, with the manual placement and spacing of letters awakening sensitivity and judgement in the designer.<sup>6</sup> Students also obtain experience in traditional bookmaking and bookbinding procedures. Advanced electives include *Drawing and Communication*, *Photography and Communication*, *Experimental Books* and *Prototyping for Communication*



*Design*. Each involves an integration of traditional and new technology. At the graduate level, education in traditional methodology is of minor importance, particularly in the MDes Interaction Design program, where new technology prevails in the instruction of design methodology.

School of Visual Arts: At the School of Visual Arts, the study of traditional fine arts techniques dominates the foundation year of the Advertising and Graphic Design programs. Students are required to complete eight credits in *Painting and Colour*, six in *Drawing*, three in *Sculpture*, and two in *Basic Photography*. Art and design fundamentals are learned via hands-on experience with traditional materials and tools. Form and content are explored through diverse art media. Technical skills and individual expression are stressed in assignments that deal with visual perception. Once these skills are developed, students proceed to integrate digital technology in the design projects completed in the second through fourth years of the program. One of the many advanced options is *Drawing for Graphic Designers*, which uses live models in the study of forms as expression of a language.<sup>7</sup> Courses that combine traditional and advanced technology in fine arts and design include: *Images in Mixed Media: Traditional through Digital*, and *Experimental Book Art*. However, the majority of third and fourth year electives deal primarily with the application of computer technology. Again, the involvement of traditional methodology is not stressed at the graduate level, as MFA candidates are generally already skilled in this area.

Illinois Institute of Technology: Education in traditional technology is not an issue at the Institute of Design, as the program deals only with graduate level<sup>7</sup> studies. Curriculum structures emphasize new technology as a means of invention and innovation, particularly at the Masters level. Though traditional methodology plays a minimum role at this level (and as with the other four graduate programs), this is not to say that traditional techniques are not manifested as significant components in the design process. Rather, traditional methodology does not receive noteworthy mention in course descriptions, as it is generally assumed that students at the graduate level already possess and utilize such skills.

*New technology: A measure of the degree of the use of computers as production tools and as media. Courses require skill development in current software programs and various digital platforms in image and text generation/manipulation.*

University of Alberta: The Bachelor of Design in Visual Communication Design requires that students demonstrate a general understanding of the use and application of computer technology in the design process. Projects that require final outputs in digital formats generally take place in third and fourth years. Software programs are viewed as tools in the design process. The required third year studio involves an introduction to programs such as Photoshop, Illustrator, and PageMaker or Quark Xpress. (Recently, instruction in these programs was added to the curriculum in the form of three consecutive, non-credit workshops. The workshops were available to second and third year students.) At the fourth year level, students are offered two courses that deal with interactive media. *Communication Design for Interactive Media I* provides instruction in multimedia, navigation, and interface design in the context of human-machine interaction.<sup>8</sup> *Communication Design for Interactive Media II* is concerned specifically with issues in Internet and web-based design. Students with a particular interest in new technology may opt for the *Computer Science Pathway*. This route includes courses such as *Calculus*, *Computer Programming*, *Computer Graphics* and *Science, Technology, and Society*. In this pathway, the majority of non-departmental classes are taken through the Department of Computing Science.

At the graduate level, students, as required, receive instruction in the theory and application of new technology. It is up to individual students to maintain currency in software programs. Technical skills are not addressed in the curriculum, although resources such as computer technicians, reference books and materials, and an up-to-date selection of software programs are available. Additionally, graduate students are free to sit in on undergraduate computer-related classes and workshops. Thesis projects most often in



clude a design component in combination with a written document. The designed product requires that students demonstrate proficiency in new technology, whether the chosen media is print, hypermedia, or animation.

California Institute of the Arts: Each year of the four-year BFA Graphic Design degree includes some form of instruction in digital applications. In the first year, students are required to take *Basic Macintosh*, a survey course that provides a hands-on approach to developing computer literacy. The class introduces page-layout procedures, image manipulation and telecommunications. Multimedia is briefly discussed. At the second year level, students are required to complete *Digital Production* and *Mac Workshops*. The specialist workshops are allotted one credit each, and focus on specific software programs such as Lingo, Flash, and After Effects. In second, third, and fourth year studios, the technological skills learned are integrated in design processes. Third and fourth year departmental electives cover an array of computer applications and their role in graphic creativity. In *Digital Type Design*, students use Fontographer to design complete typefaces. *Typography, Time and Motion* and *Digital Self-Publishing* deal with issues in new media (i.e. typographic design for television, computer and movie screens, and the use of digital media in creating visual and written content.) Animation and interactivity are introduced in *Issues in Design for Multimedia*. In *Mutant Design: The Future of the Book*, students explore the potential of the book in relation to new technology and user interaction. Small screen-based prototypes are produced. At CalArts, the Graphic Design curriculum has evolved to accommodate the fast pace of developments in new technology.

The graduate program at California Institute of the Arts offers its students the same variety of computer-based design electives available to undergrads. As previously noted, students who are inexperienced with multimedia are encouraged to complete *Beginning Multimedia*. Both BFA and MFA candidates are able to complete any number of *Mac Specialist Workshops*. The intent of these workshops is to provide a means whereby students may "fill in the gaps" in their digital knowledge, and pursue individual areas of interest. CalArts employs a number of expert instructors in new media who are able to provide comprehensive support to graduate students who are interested in completing senior projects that deal with advanced technology.

Carnegie Mellon University: Both traditional and new technologies play a significant role in the undergraduate experience at CMU. Students in Communication Design begin learning digital applications in the first year, through a required course entitled *Computer Skills*. The fundamentals of computer operation and software are covered. New technology is an integral component of the development of studio-based communication design projects. Departmental offerings include courses that explore various applications of digital creativity. Such courses include *Moving Images and Meaning*, *Digital Pre-Press Production*, *Interaction and Visual Interface*, *Time, Motion and Communication*, and *Kinetic Information Display*.

The MDes Interaction Design program at Carnegie Mellon is devoted to communication design that utilizes advances in new technology. Seminars, studios, and ideas and methods courses support a graduate-level education in Human-Computer Interface Design and Human-Machine Interaction Design. The department's approach to interaction design involves studies in communication theory, psychological factors, evaluative methods, intelligent interface agents, knowledge-based design systems, and the design of large information spaces.<sup>9</sup> Required courses in the first year of the two-year program include *Visual Interface Design*, *On-line Information*, and *Computing in Design*. Some examples of thesis and project titles are: *Navigation and Visualization of Complex Data in the Digital Realm*, *Experiments in Interaction Information Design for an Online Museum*, *An Exploration of Maps and Their Position in Information Design*, and *Toward a Memory Palace for the Digital Age: An Essay*. The MA in Communication Planning and Design does not focus as extensively on the use of new technology, although computer-based procedures are obviously integrated in the process of combining narrative structures with information design in complex communication design projects.



**School of Visual Arts:** As is the case with all four undergraduate programs, the School of Visual Arts integrates both traditional and new technology in the intermediate studio courses. Computer applications (Photoshop, Illustrator and Quark Xpress) are introduced in the second year course *Computers in the Studio*. At the third year level, when students elect to major in either Graphic Design or Advertising, a multitude of specialty electives become available. Many of these deal with new technology and its application in visual communication design. For instance, *Graphic Design for Television*, *New-Media Design* and *Graphic Design for the Internet* require proficiency in specific computer programs and methodology. *Digital Production Tools and Techniques* offers instruction in the technical and production knowledge required to create workable files. Advanced courses in Quark Xpress, Photoshop, and Illustrator are also offered for credit.

The new MFA Design program assumes that students will make use of new technology throughout their education. The degree and type of software utilized is largely dependent on individual interests and chosen thesis topics. The course entitled *Filling the Screen: The Theory and Practice of Interactivity* takes on a multi-disciplinary approach to the study of new media. The process of successfully combining traditional and digital realms (i.e. multimedia) is covered in *Crossing Disciplines: Expanding Design Media*. As the program is product-oriented, students must possess (or learn via hands-on experience) the computer skills necessary to produce portfolio-quality work.

**Illinois Institute of Technology:** At the Institute of Design, new technology plays a critical role in the education of graduate-level students. Although students are not offered credit courses in specific software programs, workshops are, at times, offered to provide specific instruction where skills may be lacking. The general assumption is that students engage in self-directed study to keep on top of advances in computer-based tools. Students are often technically savvy prior to entering the program, and share their knowledge with other students. At IIT, innovation and invention provide the philosophical backbone in curriculum structuring. The incredible selection of specialty courses available to MDes, MS, and PhD students facilitates technological experimentation and advancement alongside creativity in design.

*Authorship/personal voice: An approach to design that promotes the graphic designer as artist. The development of a personal style is encouraged in content creation.*

**University of Alberta:** At the University of Alberta, the personal voice does not play a primary role at either the undergraduate or graduate levels. As opposed to developing a personal style, students are encouraged to create project-dependent communication design that is guided primarily by user or audience needs. An exception to this generalization may occur within the undergraduate *Printmaking Pathway*, where students concurrently complete courses in visual communication design and in fine arts. Students selecting this route may be more inclined (in comparison to the other pathways) to develop an approach to design that is, to some degree, characterized by an amalgamation of art and design. However, the types of studio courses completed in visual communication design (at both the undergraduate and graduate levels) are generally geared towards a user-oriented aesthetic. The ability to recognize a particular designer's work is not an issue of importance.

**California Institute of the Arts:** Authorship and the personal voice of the graphic designer play a more significant role at CalArts. This factor is facilitated by the location of the program within a private art college, where Graphic Design is seen as one of many mediums for creative expression. The CalArts building houses the Schools of Art, Dance, Film/Video, Music, Theatre, and Critical Studies. The Graphic Design Department is a part of the School of Art. Authorship (i.e. the role of the designer as content creator as opposed to production-oriented service provider) is encouraged throughout the BFA program as well as at the Masters level.

**Carnegie Mellon University:** Carnegie Mellon is similar to the University of Alberta in that its approach to visual communications discourages the development of a signature design style. Rather, the under-



graduate and graduate programs consider user needs and the success of the communication in provoking the desired response as being of utmost importance. Aesthetic development is guided (primarily, not completely) by project-specific objectives. The BFA, MDes and MA programs promote a design methodology is external in nature, as opposed to internal. Theoretically speaking, the voice of the designer is silent.<sup>10</sup>

**School of Visual Arts:** In comparison with the other four programs investigated, the School of Visual Arts grants the highest degree of importance to the role of authorship and the designer's voice. Like CalArts, the design program operates within the organization of a school dedicated to excellence in the arts. From the freshman year onward, the BFA curriculum stresses the development of the designer's voice. The foundation year's emphasis on traditional art mediums facilitates the understanding of the graphic designer as artist. There is one course exclusively dedicated to the development of an individual voice: *Graphic Design Studio: Finding Your Own Graphic Personality or Style*. Another class, entitled *Originality*, calls for students to make their work "distinctly, unmistakably, theirs." The course requires that students assign themselves projects, the critique of which will identify their unique 'fingerprints' and remove any obstacles to them.<sup>11</sup> The emphasis on authorship is carried through the coursework, until the final completion of a required cohesive and professional quality portfolio. The objective is to produce a package that will enable graduates to stand out amidst the many designers competing for jobs in the New York City market.

5

The notion of authorship was of paramount importance in the recent development of the Master of Fine Arts program in Design. Authorship (in combination with entrepreneurship) is attributed with the ability to transform designers from service providers to content creators. A central aim is that the designer's voice is evident through the role of future graduates as producers, directors, and authors. The concept applies to a variety of media through which individuals might unleash their talents. The authorial aspiration embraces the designer as a conceptualizer intimately engaged with a total product or idea.<sup>12</sup>

**Illinois Institute of Technology:** The personal voice is not emphasized in the education of students that attend the Institute of Design. Students enrolled in the graduate programs turn to factors such as human needs, corporate strategy, behavior analysis, and technological advancement for influence in the creation of a visual aesthetic. Of all the programs offered, the Master of Design in Photography provides the greatest opportunity for personal expression, although a documentary approach is encouraged. Authorship is present to a minor degree in the invention of new communication products. However, innovation as realized within the Institute of Design, is not based upon individualistic expression or methodologies.

*Entrepreneurship:* Refers to the notion that designers take a central role in the invention and development of products intended for mass consumption. Business-related studies include marketing and project management.

**University of Alberta:** Although Visual Communication Design at the U of A does not, as a totality, promote the idea of entrepreneurship, there are structured business-related studies in one of the five *Pathway* routes: the *Business and Marketing Pathway*. Students who elect to take this sequence of interdisciplinary study complete courses in *Microeconomics*, *Financial Accounting*, *Consumer Behavior*, *Marketing Communications*, and *New Venture Organization*. Courses are completed in the Departments of Economics, Accounting, Marketing, Consumer Studies, and Organizational Analysis. The general aim of the pathway is to provide students with a basic understanding of business and marketing as they relate to visual communications. The entrepreneurial theme is not of importance in the Master of Design (Visual Communication Design) program.

**California Institute of the Arts:** The design, production, and marketing of consumer-based products is not an area that receives particular attention in the Graphic Design program at CalArts. Courses specifically geared towards business and marketing are not a component of the curriculum structure. Undergraduate and graduate students with an interest in the area would need to engage in self-directed study



in order to explore the topic. Instruction in the undergraduate *Professional Practice* course deals more with production-oriented skills than with issues related to business development and management. CalArts' division of Critical Studies does not offer electives in the areas of business and marketing.

**Carnegie Mellon University:** As at the University of Alberta and California Institute of the Arts, entrepreneurship is not of particular importance to the educational experience at Carnegie Mellon. Undergraduate students in Communication Design and Masters students in Interaction Design or Communication Planning and Design are not generally driven by entrepreneurial aspirations. However, students interested in the area might select options from business and marketing or related departments that are part of the CMU campus.

**School of Visual Arts:** There is some evidence of an entrepreneurial spirit in the undergraduate curriculum in Graphic Design and Advertising at the School of Visual Arts. In the course *Toys and Games: from Concept to Finish*, students learn how to originate ideas for mass production in the toy industry. Product categories explored include games, puzzles, action figures, dolls and cars. Students select toy types that appeal to them personally, design prototypes, and then build them. As with all SVA studio courses, the final product must be of portfolio caliber, and, in this case, suitable for presentation to a toy company.

The notion of entrepreneurship is what sets the new MFA Design program apart from other graduate programs. This particular approach to design education calls upon design students to become authors and entrepreneurs in response to the changing role of graphic designers amidst advances in new media and technology. Such changes have left many designers acting as production technicians. The MFA Design program at SVA aims to produce graduates that are not just problems solvers, but also conceptualizers who are engaged in the entire design process—with a total product or idea. As described by Steven Heller, chair of the program, “Designers should be intimately involved in the creation of viable, marketable products—from books to film, CD-ROMs to Web sites, magazines to toys.”<sup>13</sup> In the course entitled *102%: The Designer as Entrepreneur: Turning Ideas in to Products*, the focus is on transforming personal interests into both real and imaginary products. Students are evaluated on creativity and design, concept development, and commercial viability. Market strategies and merchandising are discussed. The first stage of the thesis project, *Thesis Consultation*, requires that students identify a product for full-scale development. During the second part of the Masters thesis, *Thesis Production*, students produce a finished product that is ready for marketing. The MFA Design program embraces visual communications as the “foundation for all creative activity,” and invites students from diverse backgrounds, such as graphic design and other design professions, art, photography, film, and computer science to pursue entrepreneurial interests at the Masters level.<sup>14</sup>

**Illinois Institute of Technology:** Entrepreneurship does play a role in the education of graduate students who attend the Institute of Design. Innovation and invention are hallmarks of the Masters programs in Design. This is of particular relevance in the Master of Design in Design Planning and the Master of Design in Human-Centered Design, with emphasis on Product or Communication Design. Communication design is not considered as an entity that exists in isolation. Rather, it is closely linked to other design milieus such as product design. Most often, projects encompass and integrate the ideas and methodology of both communication and product design. The Institute of Technology is well known for its innovation and advances in technological domains. Graduate students are offered specialty courses such as *Technological Development and Design Innovation*, *Design Planning and Technological Innovation*, *Design Planning and Market Forces*, and *Advanced Product Development*. A prime example of product design innovation is the Aerotecture, a “lighter-than-air multi-purpose transport” that was the Bronze Prize winner in the 1993 International Design Competition in Osaka, Japan. Students used structured planning to create an ultra-large airship and shuttle pods. Aerotecture was designed with both technological advancements and human requirements in mind.



In some cases, entrepreneurial approaches may not play a notable role in the graduate candidate's experience, as students are given a great deal of freedom in designing their programs to suit individual areas of interest. Students have numerous courses to select from, both in the Institute of Design and within the entire IIT campus. PhD students in Design may select from the same array of specialty and elective courses available to students in the Masters program. Included are options in (or related to) business and entrepreneurial studies. However, the primary intent of the PhD program is to support the completion of a research and thesis dissertation, and prepare future educators for positions in advanced design education.<sup>15</sup>

*Research-based: Design curricula which includes research methodology in the design process, to further the design student's knowledge of given phenomena related to a specific project. Research findings assist in the shaping and evaluation of end products.*

University of Alberta: At the U of A, the inclusion of research strategies in design processes is encouraged at the undergraduate level. The *Design Issues Seminar* requires that students complete research papers and presentations on issues related to design. Research skills are to be utilized whenever deemed appropriate, as specific studio projects call for various approaches to problems and information gathering. The *Social Sciences Pathway* facilitates the translation of research methodology from Anthropology, Psychology, and Sociology into the arena of visual communications. Information gathering broadens the knowledge base of the design student, and thus assists in the development of appropriate and responsible solutions. Although such an approach is recognized as valuable, students undoubtedly incorporate any number of influences in the realization of a final communication product.

At the graduate level, research plays a more active role in the types of projects students engage in. This is particularly true in the completion of the Masters thesis project, which takes anywhere from one to three years to produce, following the completion of an initial year of required courses. Thesis topics are developed by individual students under the direction of an advisor. Projects must include a researchable component, and generally are comprised of both a written document and visual presentation. The type of research conducted depends on the nature of the subject of interest, and may involve focus group analysis, questionnaires, and prototype experimentation. A user-centered approach to design requires that students gather information in areas such as cognitive and behavioral psychology, cultural studies, and sociological phenomena. Interdisciplinary methodology is facilitated by the diversity of resources offered by various university departments. Additionally, students are encouraged to step outside the boundaries of the campus and connect with industry and experts whenever beneficial.

California Institute of the Arts: Although there are aspects of research-related approaches present in the Graphic Design program at CalArts, the topic does not feature prominently in the curriculum. Undergraduate and graduate students may incorporate research procedures at the beginning stages of project development, depending on the challenges posed by particular projects. For example, students might engage in observational analysis of a particular urban context to assist in the shaping of graphic communications. At the graduate level, research processes are not as formalized as in other programs such as the University of Alberta or the Institute of Design. Although CalArts offers students library resources, the extent of non-departmental resources is limited due to the positioning of the Graphic Design program within a school dedicated solely to the arts.

Carnegie Mellon University: At Carnegie Mellon, the role of research procedures in the design process is most evident at the graduate level. Undergraduates are exposed to introductory notions of research-based design through courses such as *Introduction to Design Thinking*, which provides an overview of the ideas that ground the design disciplines at CMU. Human factors are central to the school's philosophy, and research-oriented approaches naturally support the theme. Students enrolled in the Masters programs engage more thoroughly in the practice of research through the completion of written theses and studio thesis projects. As at the University of Alberta, students have the opportunity to complete electives in



other departments, which increases the ability to select topics that complement the learning of research-based methodologies, and ultimately, contribute to the success of a design project.

**School of Visual Arts:** As SVA is a school dedicated to excellence in fine art and design disciplines, students do not have access to resources such as social sciences courses that deal specifically with research procedures. Curriculum structuring in both the Graphic Design and Advertising programs does not attribute particular importance to formalized, research-based strategies. The MFA Design program is more openly structured to include activities such as interactive seminars with working professionals, prototype modeling and testing, and discussions of market-dependent viability.

**Illinois Institute of Technology:** Research is the intellectual core of all work at the Institute of Design.<sup>16</sup> In the field of design, a research component is critical in extending the discipline's formal body of knowledge. Masters students, PhD candidates and faculty members actively engage in innovative research strategies to advance design theory, methodology, technology, and product development. Such innovation is facilitated through observation techniques, prototyping methods, design planning, demonstration projects, and the completion of research papers. ID utilizes objective methodology from the social sciences as starting points in the development of design projects. The specialty courses available to students in the Masters and PhD programs provide extensive knowledge and experience in the application of research-based knowledge to the development, design and evaluation of end products. PhD candidates are required to conduct original research. Such inquiry involves the development of innovative tools, methods, and design principles. Examples of topics of investigation include: computer-supported design tools, design theory and policy, and methods of analysis and synthesis. Behavioral observation and analysis often yields surprising and powerful insights that lead to inventive concepts.<sup>17</sup>

*Intuition-based: Course development that emphasizes that which is emotive, intuitive, and expressive in the design process. The designer's personal experience and artistic interpretation of a visual problem shapes the creation of graphic communication.*

**University of Alberta:** Intuition-based design is not a primary theme in the U of A's undergraduate program in Graphic Design. Although it is a difficult area to define and differentiate from other approaches to the generation of a design aesthetic, the program philosophy generally discourages personal, internalized sources of influence. There are, however aspects of the program that facilitate artistic expression in visual communication problems. The existence of the program in a department of Art and Design contributes to the integration of fine art and communication design studios within the curriculum structure. This is particularly true in the *Printmaking Pathway*, which exposes students to a more emotive and expressive approach to the combining of form and content.

The MDes in Visual Communication Design is a program that stresses the importance of research in the creation of a visual aesthetic. However, this notion is project-specific, and its relevance varies, as dependent on the nature of a topic. Although the designer's personal experience and artistic style is sure to surface in graphic design solutions, the amalgamation of other approaches, based less on intuition, and more on external information gathering, is encouraged.

**California Institute of the Arts:** The idea of Graphic Design as one of many art mediums is a concept that is encouraged by the educational philosophy of CalArts as a whole. Generally speaking, the curriculum supports the development of a personal style. The idea of the designer's voice involves personal interpretation, artistic expression, and an embracing of authorial approaches. Intuitive approaches are also facilitated at the graduate level. However, it is important to note that such internally inspired influences occurs in varying degrees and combinations with other considerations such as message intent, research findings, media-related functions, and the success of the communication in relation to audience interpretations or usage.



**Carnegie Mellon University:** Carnegie Mellon is similar to the University of Alberta in regard to the degree of intuitive-based measures. Indeed, individual personal styles are sure to exert an influence on the aesthetic qualities of studio projects. However, the department stresses the importance of utilizing approaches to the creation of form that are shaped by the nature of the content, context and intended use of communication products. This is true of both the undergraduate and graduate programs. The primary objective of design, as taught at CMU, is meeting the needs of the user, not providing a vehicle for the artistic expression of the designer.

**School of Visual Arts:** The School of Visual Arts promotes the role of the designer as artist. The majority of courses completed in the foundation year of the BFA program are in the area of fine art fundamentals. The foundations for design are learned via traditional art disciplines such as painting, drawing, and sculpture. That which is emotive and expressive is encouraged by instructors and facilitated by the selection of course offerings. In the course entitled *Advertising/Art Direction*, there is an emphasis on individuality in the hybrid activities of concept making and concept designing. Creative freedom is a hallmark of the program, and recognizable aesthetic styles are expected from students. In the elective class *Images in Mixed Media: Traditional through Digital*, Graphic Design and Advertising majors are asked to “exploit maximum potential to mix techniques, yet retain the artist’s individual style.”<sup>18</sup> The message is that designers and artists are one in the same. In another elective, *Drawing for Graphic Designers*, the intent is to help students discover their own creative imaginations, unveil their own genuine originality, express their feelings, and convey their ideas.<sup>19</sup> *Experimental Book Art* requires the investigated subject be personally chosen, and that the design process be the individual’s method of expressing inner experience.<sup>20</sup> Such examples support the curricular theme of the importance of personal expression and artistic interpretation in the shaping of graphic communication.

The MFA Design program stresses the value of the presence of the designer as the creator, the author and entrepreneur. With this educational philosophy comes a call for designers to focus on their own passions and needs, transforming interests into viable commercial ventures. An example of an intuitive-based project is the “Personal Magazine,” developed by instructor Steven Guarnaccia for the course *102%: The Designer as Entrepreneur*. In this assignment, students were asked to create an autobiographical magazine in the form of a box (see the SVA section of Chapter 4 for a completed project example). Although there is a definite nurturing of intuitive processes, it is clear that such an approach does not exist in isolation, as the complexity of design processes involve many factors, both internal and externally-based. Additionally, initiatives and directives vary among individual students.

**Illinois Institute of Technology:** The role of emotive influences and personal expression is a not of significance at the Institute of Design. This does not mean that student intuition does not play a part in aesthetic developments within the design process. Rather, it is an influence that is low on the list of priorities in educational philosophy and instruction directives. The MDes, MS, and PhD programs rely more on the influences of human factors, technological innovations, and research procedures in the creation of communication design and related products.

*Information design: Visual communication design that facilitates the sharing of information through the organization and presentation of images and text. Includes the design of books and educational materials.*

**University of Alberta:** Visual Communication Design at the U of A deals primarily with information design, as opposed to design for persuasion. Persuasion-based communication, however, is a theme for study in public service-oriented communication campaigns. Students who complete the Bachelor of Design program engage in studio projects such as publication design, design for education, and web-based information resources. In the third year course entitled *Information Design*, topics covered include text, tables, charts, diagrams and electronic displays. Perception and cognition are studied in relation to user-machine interaction. Students explore the visual presentation of abstract and quantitative information.<sup>21</sup> As information design is a critical theme in the curriculum structuring of both the undergraduate



and graduate programs, study of such is engrained in program offerings—from theoretical studies to studio production. At the graduate level, faculty interests and expertise do not support studies in persuasion or advertising. Rather, MDes candidates complete thesis projects that are compatible with the information-related philosophy of the program. Examples of past thesis projects include: *Advanced Directives: Accessibility and Usability: The Role of Information Design in the Development of a Critical-use Document* and *The Presentation of the Visual Aspects of Interactive Multimedia Instruction*.

California Institute of the Arts: The Graphic Design curriculum at CalArts, at both the graduate and undergraduate levels, is more concerned with information design than advertising (although the two notions are not mutually exclusive, and may overlap at times, given certain projects). The organization and presentation of images and text for the purpose of sharing information is practiced in studio courses in print and multimedia. The innovative presentation and navigation of narrative structures in the three-dimensional web-based realm is an example of an area of interest. The *Beginning Multimedia* course introduces students to the process of self-publishing on the web, fostering conceptual development and content creation. The senior level course *Information Design* offers instruction in visual logic as applied to informational design problems, providing a basis for the development of structured, systematic typographic solutions.<sup>22</sup> Another course that deals with information design is *Publication Design*. In this class, students learn to recognize successful sequence design. Projects are completed in various formats and involve experimentation, pacing, scale and conceptual organization of diverse material and text.<sup>23</sup>

Carnegie Mellon University: Information design represents a primary area of study in the undergraduate curriculum at CMU. The program is concerned with the development of user-centered visual communication, which includes the design of various publications and educational materials. A fourth-year studio course entitled *Information Design* addresses the complexity of current visual culture. Topics of interest include the visible and accessible arrangement of complicated typographic information, as in the design of train schedules, VCR user guides, and tax forms.<sup>24</sup> Projects completed in *Maps, Diagrams, and Graphs* emphasize “the application of basic design principles, the development of specific visual and graphical languages, and the communication of complex data sets with clarity.”<sup>25</sup> Discussions and readings contribute to a critical understanding of information design. There are many other courses that deal with the notion of user or audience-driven information systems. These include *Kinetic Information Display, Experimental Books, and Signs, Symbols, and Marks*.

At the graduate level, an advanced understanding of information design is critical in both the Interaction Design and Communication Planning and Design degrees. Visual interface design is of particular relevance in the Master of Design program, as interactive, human-centered information exchange is studied in new digital environments. The *Information Design* studio investigates the orchestration of words, images, sound and motion. These elements are considered in whole information systems, as opposed to individual components that function independently. As explained in the course description, “They [words, images, sound and motion] must be integrated and function synergistically, in the context of education, practical communication, and entertainment.”<sup>26</sup> The MA degree, which is offered jointly by the departments of Design and English, requires that students demonstrate their understanding of information structuring through the integration of written documents and imagery in design processes and products.

School of Visual Arts: The Advertising program at SVA focuses on the “art of persuasion,” in contrast to the general concept of information design. However, those who opt for the Graphic Design major have the opportunity for greater exposure to the principles of effective structuring of information in the form of books and publications for print and web-based mediums. The freedom granted to students in selecting from a long and varied list of studio-based electives allows individuals to focus on particular areas of interest, thus challenging the ability to define precisely the degree of experience with specific forms of information design.



At the graduate level, students may choose to complete thesis projects in branches of information design such as editorial design. The spectrum of potential entrepreneurial-based projects is broad, and subject matter varies in its relation to information design. The required course that deals most directly with issues in information design is *The Book: From Idea to Package (Editing, Designing, Writing and Packaging)*. However, information design as a general concept is not a particularly strong theme within the program, as emphasis is directed more towards authorship and the production of one-of-a-kind products within potentially lucrative market bases.

Illinois Institute of Technology: Information design is of primary significance within the curriculum structuring of the Masters programs in design at IIT. An understanding of information design principles and issues is critical in the completion of projects that combine product and communication design. Examples of topics investigated include the design of classroom learning materials and interactive devices for managing vast amounts of television-based information sources. Students in the MDes Design Planning, MDes Human-Centered Design, MDes Photography, MS Design, and PhD Design programs select from a vast array of professional sequence workshops and specialty courses. Such courses include: *Information Structuring, Data Structures and Cellular Modelling, Diagram Development, Diagram Dynamics and Theories of Information and Communication*.<sup>27</sup>

*Commercial advertising: Client and market-driven graphic design that is concerned with persuasion, and aims to sell a particular product or service to a target audience. Financial gain is the primary objective.*

University of Alberta: The Visual Communication Design program at the University of Alberta does not provide instruction in the area of commercial advertising. Rather, the Bachelor of Design and Master of Design degrees deal primarily with information design, and with public service-oriented communications. Market-driven Graphic Design that involves persuasive strategies does not surface as a topic of study in any of the studio-based courses.

California Institute of the Arts: At CalArts, advertising does not feature prominently as an area of curriculum emphasis. Although the program offers undergraduate and graduate students quite a selection of specialty options, commercial advertising is not one of them. Certainly, there are market-driven influences in areas covered by the program—such as graphic design for film and television (a dominant industry in the Hollywood context), and some types of Internet and web-based projects.

Carnegie Mellon University: Students interested in a career in the field of advertising would find that the communication design program at CMU would not compliment their particular career objectives. The department's philosophy is very clear in its goal of facilitating socially responsible, user-centered communications. This agenda is transcribed in the curricular make-up of both the undergraduate and graduate programs.

School of Visual Arts: Of the five graphic design programs investigated, the School of Visual Arts is the one institution that offers a major program of study in Advertising. Graphic Design and Advertising share common foundations at the first and second year levels. The second year *Basic Advertising* course teaches students how to recognize successful advertising strategies, and how to come up with unique concepts that suit a given product. Print advertisements and TV commercials are addressed. When students reach their third year, they choose to major in one of the two fields (i.e. Advertising or Graphic Design). Although the two programs share many of the same elective courses, each has distinct studios in the third and final years. The required third year Advertising studio is entitled *Advanced Advertising*, and deals mainly with print media. Creative concept development is the primary emphasis of the studio. There are elective courses exclusively geared towards the BFA in Advertising, including: *History of Advertising from the 19<sup>th</sup> Century to the Present, Advertising Concepts, and Advertising/Art Direction*. The final year of the



Advertising program focuses on the development of a finished portfolio. The design of effective print campaigns is of primary importance. The portfolio provides a means by which graduates might penetrate the highly competitive New York City marketplace.

Undergraduate curriculum resources and past experience with Advertising education provide a supportive foundation for the integration of persuasion-oriented projects in the MFA Design program. The entrepreneurial emphasis of the graduate curriculum includes the study of marketing strategies and analysis of financial viability. The sale of designed products to target audiences is a primary goal.

**Illinois Institute of Technology:** Advertising instruction that is driven by financial objectives is not compatible with IIT's perspective on communication design. The university approaches design from a broad and interdisciplinary perspective, combining the realms of product and communication design in human-centered processes and projects. The specialized focus on graphics specifically geared for persuasion does not coincide with the general philosophy of the Institute of Design.

*User/audience needs:* Refers to the degree to which the design curriculum promotes the addressing of audience or user needs in the creation of visual communications. The goal is to incorporate an understanding of human factors in the establishment of design criteria, thereby promoting responsible and successful solutions.

**University of Alberta:** The Visual Communication Design program at the University of Alberta emphasizes the importance of addressing user needs in design solutions. At the undergraduate level, students are given assignments that require them to research project-specific factors that assist in an understanding of how a design solution will affect the intended audience, and how individual members of that audience might respond to the visual communication. The department encourages a socially responsible, contextually aware approach to problem solving. Although the user-centered emphasis is more evident at the Master of Design level, undergraduates gain some experience in the processes involved in incorporating a knowledge of basic human factors and cultural understanding in the shaping of graphic solutions. Students who elect to complete the *Social Sciences Pathway* focus more specifically on the application of knowledge and research methodology from the fields of Anthropology, Psychology, and Sociology in user-based design processes.

At the graduate level, MDes candidates are required to complete thesis projects that reflect a social consciousness and provide a meaningful contribution to research in visual communications. Areas of study focus primarily on information design and design for educational materials. Examples of thesis titles are: *Taking Shape: Multi-Literacy for Children. An Interactive Instructional Program; A Targeted Visual Communication Campaign: Safety Communications for 18-24 Year Old Male Drivers in Alberta*, and *The Design of ESL Materials for Adult Immigrants*. In his book, *User-Centred Graphic Design*, Jorge Frascara, coordinator of Visual Communication Design at the U of A, states: "The role of visual communication does not end in its deployment, but in its effect. The motivation for its creation and the fulfillment of its purpose center on the intention to transform an existing reality into a desirable one. This reality has to do with people, not with graphic forms."<sup>28</sup> Graduate students are expected to engage in self-directed, interdisciplinary research that ultimately guides creative processes and resultant communication products. The program aims to graduate reflective practitioners who are concerned with user-centered processes, and who conduct their work in information and education design within a context of social responsibility.<sup>29</sup>

**California Institute of the Arts:** Audience needs are factored into the creative process as taught within the curriculum of both the undergraduate and graduate programs at CalArts. However, the notion of user-centeredness does not, comparatively speaking, surface as a prominent theme in relation to other factors. The personal voice and authorship are attributed considerable weighting in design solutions that are defined as successful. Again, it is difficult to isolate influences from one another, as a variety of forces are at work in shaping graphic communications.



Carnegie Mellon University: The BFA program at CMU promotes the addressing of user needs as a central component in communication design processes. In the first year of the undergraduate program, all design majors complete a required course entitled *Human Experience in Design*. As stated in the departmental course listings, "This course introduces the central theme of design and the design professions: the importance of human beings in all aspects of design thinking and practice."<sup>30</sup> User needs are investigated in terms of physical, psychological, and spiritual or cultural factors. The user-centered theme permeates the studio experience throughout the four-year program, and provides the philosophical basis for *Design Studies* courses, which peruse design history, theory, and criticism.

At the graduate level, the importance of the user in the design equation is realized at more advanced levels. Masters students apply their research into human factors to specific problems and communication strategies. Both the MA in Communication Planning and Design and the MDes in Interaction Design programs place a strong emphasis on the understanding of the specific needs of the user or audience. In the two MDes Interaction Design majors (Human-Computer Interface Design and Human/Machine Interaction Design), the human component is paramount in informing the design process. At CMU, pluralistic approaches to problem-solving assist in bridging the gap between functionality (things) and usability (humans).<sup>31</sup>

School of Visual Arts: The undergraduate programs in Graphic Design and Advertising reflect more of an interest in client needs than in user needs. This is particularly true of the Advertising program, where design for persuasive purposes aims to sell a particular product or idea. Although user needs are undoubtedly considered as factors influencing the development of graphic design solutions, the curriculum structure and philosophy places a greater importance on the communication of a personal style. At the graduate level, authorship is defined as the key to success in the professional world. Although multidisciplinary study is promoted as an important part of thesis creation and completion, the course information available does not attribute particular significance to the careful investigation of human factors. Rather, importance is placed on the entrepreneur's ability to produce a product that is commercially viable in the New York marketplace.

Illinois Institute of Technology: User needs play a critical role in the establishing of design criteria at IIT. In each of the Masters programs and in the PhD curriculum, studio and theory-based courses promote an understanding of the influence and impact of design on individual users or audiences. Master of Design students may elect to major in Human-Centered Design, with an emphasis on Product or Communication Design. The list of specialty classes available to students in the MDes, MS, and PhD programs includes courses such as: *Human-Centered Design*, *Social Implications of Design*, and *Behavioral Analysis and Design*. There are also three separate courses that focus specifically on human factors: *Cognitive Human Factors*, *Social Human Factors*, and *Cultural Human Factors*. In studying cognitive factors, students investigate the ways in which mental modes are addressed in information design strategies. The ideas and methods taught concerning social human factors facilitate the design of information, products, and environments that fit the social patterns of groups, particularly in relation to the support of group work.<sup>32</sup> The study of cultural human factors provides graduate students with ideas and principles that enable them to understand the complex relationship between communication and/or product design and culturally based values and behavior. The educational philosophy at the Institute of Design requires that students be actively engaged in ongoing observation and analysis that contribute to the successful shaping of innovative design as determined by user-centered parameters.



## Concluding Remarks

In analyzing each school according to individual concerns and issues as identified, a means of mapping the terrain of current graphic design education is revealed. Two general categories of pedagogy are evident in the graphs. The first promotes the designer as artist, an individual whose personal creativity and expression is of utmost importance. Such a conceptual basis is evident in the curriculum of both the School of Visual Arts and California Institute of the Arts (see Figures 3A and 3B). When looking at the comparative placement of the schools in the areas of organization, media, focus, and methodology the similarities are clear. One noteworthy distinction between SVA and CalArts is the inclusion of an Advertising major in the undergraduate program at SVA. This sets the School of Visual Arts apart from each of the other five programs in the area of curriculum concentration. The advertising emphasis is, no doubt, facilitated and inspired by the larger New York City environment, which is the leading center of commercial advertising worldwide.

Additionally, the two schools depart somewhat in their particular areas of emphasis at the graduate level. The new MFA Design program at the School of Visual Arts is unique in its singular focus on the designer as author and entrepreneur. Although the concepts of authorship and personal voice feature prominently in the MFA in Graphic Design at CalArts, there exists an increased flexibility in the ability of students to pursue advanced studies in areas such as typography, motion graphics, and Internet and web-based design (with or without an entrepreneurial bias).

The graphs are indicative of a second type of curriculum classification or pedagogical approach. Figure 4A illustrate the similarities between the undergraduate programs at the University of Alberta and Carnegie Mellon University. Both universities place an emphasis on an understanding of user needs in design processes, and concentrate primarily on information design-related issues. Research findings are applied to design problems to promote the notion that the designer is a self-effacing entity. Students are encouraged to look outside themselves for answers to the question of how to produce socially-responsible solutions. The University of Alberta is particularly strong in incorporating interdisciplinary structured options. The facilities and resources offered by other departments at both large universities supports the conceptual basis of each program.

At the graduate level, there is some departure concerning the emphasis of certain factors at the U of A and CMU. This is primarily due to the specialized nature of the degrees offered in the Masters programs. CMU's Master of Design in Interaction Design provides expert faculty and technological resources that ensure the program's strength in the area of new technology and the dimensions of motion and sound. The MA in Communication Planning and Design fosters interdisciplinary harmony in the areas of English and Communication Design. The Master of Design program at the University of Alberta is more generalist in its overall approach, supporting a wide range of thesis topics within the scope of user-centered interdisciplinarity. These differences aside, graduate level studies at the U of A and CMU have much in common conceptually, as explained in greater detail in the individual analysis provided above and supported by the comparative graphs (refer to Figure 4B).

Illinois Institute of Technology, in its exclusive offering of graduate-level degrees, including a PhD in Design, is similar to the U of A and CMU in its emphasis on user or audience needs and research-based design methodology. However, IIT departs from the other programs in its exceptional provision of curricular flexibility and structured offerings, facilitated by the devotion of the Institute of Design to graduate students, and the expansive resources available at IIT. Advances in new technology play a critical role in the student experience, as students are encouraged to experiment and innovate in the invention of new design products. This particular slant contributes to the increased importance of entrepreneurial notions in comparison with Carnegie Mellon and the University of Alberta.



### Footnotes

1. From a conversation via e-mail with Louise Sandhaus.
2. School of Visual Arts. *Master of Fine Arts: Degree Programs*, New York, NY, 1999-2000.
3. California Institute of the Arts. *What Do We Call It Now? Graphic Design Moves with Technology*, in *CalArts Current*, Volume 10, No. 2, Feb/Mar 1998, p. 4.
4. *From the Alumni Questionnaire responses*, Section 3.
5. Carnegie Mellon University. *Carnegie Mellon University Undergraduate Catalog*, Pittsburgh, 1996-1998, p. 307.
6. Ibid.
7. School of Visual Arts. *Fifty Reasons to Be Here: School of Visual Arts 50<sup>th</sup> Anniversary, A College of the Arts*, New York, NY, 1998-1999, p. 115.
8. University of Alberta. *University of Alberta Calendar*, Edmonton, Alberta, 1999-2000.
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10. *From the Alumni Questionnaire responses*, Section 3.
11. School of Visual Arts. *Master of Fine Arts: Degree Programs*, New York, NY, 1999-2000, p. 23.
12. Ibid.
13. Ibid.
14. Ibid.
15. Illinois Institute of Technology. *Institute of Design Information Booklet*, Chicago, 1998-1999, p. 26.
16. Ibid, p. 6.
17. Ibid.
18. School of Visual Arts. *Fifty Reasons to Be Here: School of Visual Arts 50<sup>th</sup> Anniversary, A College of the Arts*, New York, NY, 1998-1999, p. 115.
19. Ibid.
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23. Ibid.
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26. Carnegie Mellon University. *CMU Graduate Course Listings*.
27. Illinois Institute of Technology. *IIT Institute of Design Web Site*, Course listings.
28. Frascara, Jorge. *User-Centred Graphic Design: Mass Communications and Social Change*, Taylor & Francis Inc., Bristol, PA, 1997, p. 3.
29. Frascara, Jorge. From a program self-study, prepared for *The Graduate Studies Review: Visual Communications Graduate Program*, pp. 1-2.
30. Carnegie Mellon University. *Carnegie Mellon University Undergraduate Catalog*, Pittsburgh, 1996-1998.
31. Carnegie Mellon University. *CMU Graduate Course Listings*.
32. Illinois Institute of Technology. *IIT Institute of Design Web Site*, Course listings.

*Note: For further information, refer to individual course descriptions, Appendix A-E.*



## CONCLUSION

Current issues in Visual Communication Design education may be broken down into five general categories: Curriculum organization, media, focus, method, and concentration. Organizational issues deal with curriculum flexibility, structured options, and interdisciplinary processes. Media concerns include the dimensions of motion and sound, and the integration of traditional and new technology. Post-secondary programs also differ in their particular areas of focus, which may be described in relation to the comparative value attributed to the notions of authorship and personal voice, user or audience needs, and entrepreneurship. Methodological variations range from an emphasis on pure intuition to primarily research-based processes. In regard to program concentration, there are two principal areas of visual communication taught: information design and commercial advertising.

The five programs researched—The University of Alberta, California Institute of the Arts, Carnegie Mellon University, The School of Visual Arts and Illinois Institute of Technology—provide a diverse spectrum from which to map the terrain of current pedagogical concerns. Through an investigation of these schools, it is possible to draw conclusions that are representative of the contemporary state of issues and influences in Graphic Design education in the North American context.

Curriculum organization varies greatly among post-secondary Graphic Design programs. The determination of the degree of flexibility in course offerings, structured options, and interdisciplinarity relies largely on the type of school (i.e. small private art school or major university), as the scope of subject matter and available departmental and interdepartmental resources differs both quantitatively and qualitatively. The philosophical approaches of individual schools and the distinctive specialties offered by graduate programs are determinants of the nature of curriculum organization and resultant varieties in educational experiences available to students. Interdisciplinary studies may occur with the realm of fine arts and design, or extend to include other disciplines such as business and marketing, computer science, or social studies. It is difficult, if not impossible, to prescribe an ideal or best solution, as “all schools cannot be all things to all students.” However, with the continuously extending umbrella of disciplines and specialties consulted or directly involved in visual communication design processes, it is certainly advantageous to provide students with broad educational experiences and practice with cooperative strategies. The more opportunities a student has to design his or her program of studies to meet individual interests, the better prepared graduates will be to enter one or more of the multitude of possible roles in the professional world.

The comparative importance attributed to traditional and new technologies in graphic design processes is a hot topic of debate in educational circles. Undergraduate faculty are overwhelmed by the notion of teaching computer proficiency in an ever-growing market of software programs and advancing technology. Instructors juggle traditional and new media in an attempt to provide their classes with a general knowledge of how to utilize both types of technology in design processes. There is a general consensus that computer methodology cannot fully replace manual skills—that traditional methods should be fully explored. Yet, the four-year undergraduate program provides barely enough time to transfer the growing base of required methodological knowledge, let alone provide instruction to facilitate the growth of student designers who are perceptive, creative, innovative, and socially responsible.

There are many ways in which new media has been incorporated into curriculum. Some schools try desperately to cram both digital and manual methods into the primary studio-based courses. Students either swim or sink, and many are simply overwhelmed by technical particularities, unable to designate enough time to fully absorb and consider the actual design problem to be addressed. Other programs may refrain from teaching pure software courses, as faculty believe that such instruction is within the realm of technical schools, not colleges or universities. The resultant problem is that student needs are not met by the schools they attend and ultimately, financially support.



One solution that seems to work fairly well involves the offering of non-credit workshops to students in software programs such as PhotoShop, Illustrator, and PageMaker or QuarkXpress. The process of learning such software might be likened to the experience of learning a musical instrument: One must learn the basic notes and general procedures before one is able to create beautiful music, or in this case, successful design. This is not to say that instruction in the elements and principles of design cannot be incorporated into classroom software-specific exercises. In fact, they should be. The same type of workshops would benefit graduate students as well. Offerings may be more varied and complex, allowing students to learn programs that are new, or that they might not have previous experience with.

The dimensions of motion and sound present a further challenge to educators who strive to provide their students with a well-rounded and up-to-date educational experience. Importantly, issues concerning the inclusion of motion and sound challenge traditional definitions of graphic design, a field that was originally limited to comparatively static, two-dimensional print design. There is debate over whether or not studies in motion and sound even belong in programs of graphic design or visual communication design, with some educators proposing that such new media is best associated with departments of Film Studies. Educators cannot deny the increasing involvement of the third and fourth dimensions in communication design. With the advent of the Internet and web-based design came a dire need for practicing graphic designers to become involved in such work. If left with sole responsibility in this area, 'techies' and those inexperienced with design language and lacking any measure of visual sophistication, would wreak havoc in the new sphere of two, three, and four-dimensional visual communications. We've all seen examples of this when searching the Net!

It would be advantageous to provide undergraduate students with some exposure to creating solutions that involve motion and sound. Elementary exercises may be incorporated with more traditional assignments. An example of this is an assignment that was given to second year Graphic Design students at CalArts. Student created, via manual methods, a logo for a store. The logo was then brought into a multimedia program. Students were given basic instruction in the successful incorporation of motion and sound, and produced two to five minute sequences that promoted their store (see the CalArts section of Chapter 4 for a completed project sample). Students who wish to work professionally with motion and sound may opt to take specialized courses in 3<sup>rd</sup> and 4<sup>th</sup> years, or progress to graduate-level studies at a school such as Carnegie Mellon, which offers a Master of Design in Interaction Design. Finally, it is critical that Graphic Design departments hire educators who are current in technological issues and procedures, providing students with both the facilities and instruction to incorporate traditional and new technology in their explorations and solutions.

Post-secondary programs in Visual Communication Design vary considerably in the areas of focus they promote. Some Graphic Design departments, and particularly those that exist as a part of a larger art college, encourage students to find their personal voice, to command authorship of their ideas and, ultimately, develop a unique personal style. An emphasis on audience or user needs operates in direct opposition to this notion. Instead of looking within oneself for that which defines "good design," individuals conduct research into topics such as perception, cognition, and social responsibility. In considering the context of the communication and the potentially positive effects, students develop a means of evaluating their work in cooperation with others. Although, at the undergraduate level, there is much basic knowledge to be covered in the classroom and studio, students should gain some measure of experience in the development of processes that place primary importance on the intended audience and/or users of the final communication product.

An entrepreneurial focus places primary significance on the establishment of successful business and marketing skills. This particular approach may take the shape of two different forms: Entrepreneurship that is tied to authorship and the act of creating products that are viable within a particular marketplace, and that which is studied as a complement to the investigation of general design issues and procedural concerns for business. In either case, it is important to consider the effect of the focus on the general



public or a specific target audience. Does the work contribute to a positive experience and harmonious living environment, or is the primary goal financial gain alone?

Methodological variations among schools are largely connected to the other categories of factors for analysis. The issues do not operate in isolation—rather, they combine to create a complex arrangement and realization of conceptual and philosophical biases. Intuition-based processes are an inherent component of programs that promote authorship and the development of the student's personal voice. But visual communication design is not fine art, and although the disciplines may share some notions of inner creative workings, graphic design is, ultimately, produced for someone or something outside of oneself, directed toward and driven by a particular function or purpose, whatever that may be. Research-based methodology does a much better job of ensuring that creative work addresses the needs of a target audience, user, or society at large. It is simply not responsible to rely solely on one's intuition in the development of visual communications. Colleges or universities that facilitate an understanding of the application of research procedures to the design process are much more likely to graduate professionals who respond appropriately (and thus successfully) to design challenges. The measure of success must come not from that which is internal or individual, but that which is externally oriented and community-conscious.

The primary areas of concentration within programs of Visual Communication Design are information design and commercial advertising. Information design deals with the development of communication systems that facilitate the sharing of information, and may take final shape in various formats and mediums. Commercial advertising is concerned with the notion of persuasion, or successfully seducing a viewer into purchasing or supporting a particular product or idea. The inclusion of an advertising major is determined both by a program's philosophical standing and contextual needs. A university program promoting the significance of human factors is more likely to advocate the successful development of information-related communication than a school located within an urban metropolis whose economy is largely fueled by commercialism and capitalist gain. The city of New York and the School of Visual Arts' location within its center is an excellent example of this. Ultimately, the determination of one's success can be measured in both financial and humanistic terms. The degree of importance attributed to each is something that an individual program promotes (and is responsible for) through the particular character and quality of curriculum.

A research-based analysis of five North American programs in Visual Communication Design provides a basis for understanding the increasingly complex nature of pedagogical debate. Certainly, the information revealed through interviews, questionnaires, student work, and contemporary issues analysis is representative of a wide range of subjects and concerns. The design community would benefit from the establishment of an accessible and up-to-date information resource that addresses the multitude of specific topics and concerns. Educational issues discussed require further study and, importantly, continued correspondence with key schools that are collectively representative of the approaches and influences unique to the North American context. Individuals, whether faculty, students, or practicing professionals would benefit from stepping outside the confines of one's own particular environment—in search of extended meaning and a broader definition of graphic design. The prospect of such investigation is both overwhelming and exciting. Technological and societal transformations ensure ever-changing realms of diversity and debate within educational institutions and professional practice. Colleges, universities, and other post-secondary institutions play a key role in the ongoing shaping, securing, and defining of the discipline of visual communication design.

In summing up what was said above, there are four points that I would like to propose as guiding principles: 1) It is not possible to prescribe an ideal best solution for a visual communication design program, as all schools cannot be all things to all students; 2) It is advantageous, however, to provide students with broad, cross-disciplinary educational experiences that allow each student to develop his or her best abilities to the maximum; 3) Given the way communication design is evolving, it would be advantageous for students to have some experience in the integration of motion and sound in 'graphic' design projects;



and 4) Research-based methodology is much more successful in meeting user or audience needs than intuition alone.

As this analysis argues, it is not possible today to talk only about better or worse design schools. It is indispensable first to look at positions within the many possibilities the field allows. While schools in the past have always differed, it is possible to believe that in the 1920's there was no other design school more important than the Bauhaus; and some would say that in the fifties the most important school of design was the Hochschule für Gestaltung at Ulm. The Americans might insist that both schools were nonsense and that several U.S. advertising and illustration schools were more practical. However, in the fifties there was still the idea that someone was right, and someone was wrong. Not any longer. After the late seventies and the development of postmodernism and the notions of plurality and complexity, it became apparent that the field of design education was not formed by one dimension—in which one could be better or worse—but that there were many ways of dealing with design education, and that each way offered something valuable to both the students and society. Thus we arrived at some sort of maturity in the field, where we can accept diversity, and benefit from it.

In the seventies, schools began to look inside themselves, trying to discover strengths among their staff and opportunities and needs in their locale, developing more distinct profiles and taking the best advantage of what they had, rather than trying to be what they were not. It became clear that the design education problem had to do with choices, resources and realities. The study developed for this thesis was based on a selection of post-secondary institutions that enjoy a recognizable reputation in the field of visual communication design. This reputation has both to do with clarity in their direction and quality within it. It was not the intention to pretend that the five schools investigated cover the entire field. One could select five other 'good' schools and quite likely gain new insights. The important point of this thesis is to contribute to the general understanding of various approaches and positions. With such information, students intending to study communication design could ensure that there is an appropriate match between personal goals and skills and that which a program is able to offer and demand. Additionally, design educators might better understand and define their positions within a matrix of complex pedagogical philosophies and biases.

In regard to the direction of a particular school, the location, faculty and resources available provide an inescapable context. But no limit is fixed, and that is why the word 'context' is used as opposed to 'boundary'; creativity and drive have many times helped individuals create conditions for things to happen despite all appearances and external forces.

First and foremost, a school has to make sense, and it has to have the personnel and the resources necessary to realize that sense. It is not by chance that the University of Alberta's visual communication design program is interdisciplinary, being set in a major university with more than 75 departments; that CalArts is exceptionally artistic, being in the center of a renowned school of Fine Arts and adjacent to the city of Los Angeles; that IIT is technological and business oriented, being housed in a technical institute and in a city that controls a major sector of the American economy; that Carnegie Mellon embraces new media and is language oriented, given the technical bias of the university and the leadership of faculty such as Richard Buchanan; and lastly, that the School of Visual Arts focuses on the commercial applications of graphic design, as it is situated in the heart of New York City, the world capital of advertising. Cities, institutions, and educators play decisive roles in the evolution of communication design programs. It seems that a successful school requires sound leadership and a harmonious fit between the ideals pursued and conditions available, in order to continue evolving as people and situations change, within and amidst the complexity of contexts where design both operates and influences.

It is my hope this thesis contributes to the identification of some key factors in design education—factors that are paramount in the realization of the post-secondary school's constant need to both keep up with the times, and sometimes, lead them.



## APPENDIX: COURSE LISTINGS

### APPENDIX A: UNIVERSITY OF ALBERTA

#### Course Listings

Visual Communication Design  
Department of Art and Design

#### DES 268 Introduction to Studio

3 credits (first term, 0-6L-0). Directed study in one subject embraced by DES 370 or DES 390.

Prerequisites: ART 131 or 132 and consent of Department.

Note: Restricted to students in the Faculty of Education only.

#### DES 337 Special Projects in Studio Disciplines

6 credits (two term, 0-6L-0). Special projects in studio disciplines by special arrangement with the Department.

Prerequisites: ART 131 or 132 and consent of Department.

#### DES 338 Special Projects in Studio Disciplines

3 credits (either term, 0-6L-0). An introductory design course intended to meet special teaching needs not otherwise satisfied under existing course offerings.

Prerequisites: ART 131 or 132 and consent of Department.

#### DES 390 Foundations of Visual Communication Design

6 credits (two term, 0-6L-0). Introduction to the principles, methods and techniques of visual communication design. Study of communication concerns through the integration of photography and typography. Emphasis on appropriateness, clarity, expression and description. Introduction to information and publication design problems.

Prerequisites: ART 131 or ART 132 and consent of Department.

#### DES 395 Introduction to Form, Visual Elements and Systems

3 credits (either term, 0-6L-0). Structure, representation and expression. Creation, observation and categorization. Form, color and tone systems in contemporary and historical design, and in the environment.

Prerequisites or corequisites: DES 390 and consent of Department.

#### DES 396 Introduction to Research and Theory in Design

3 credits (either term, 0-6L-0). Introduction to information gathering methods, literature search and empirical research. Problem identification and definition. Purposes, goals, design and evaluation methods. Communication theory.

Prerequisites or corequisites: DES 390 and consent of Department.

#### DES 425 Word and Image: Intermediate Projects in Printmaking for Designers and Artists

6 credits (two term, 0-6L-0). Exploration of the multiple relationships between word and image generated through consideration of text.

Prerequisites: ART 322 and DES 390.

Note: Registration priority will be given to BDes Printmaking Route students.

#### DES 437 Special Projects in Studio Disciplines

6 credits (two term, 0-6L-0). Special projects in studio disciplines by special arrangement with the Department.

Prerequisite: consent of Department.



**DES 438 Special Projects in Studio Disciplines**

3 credits (either term, 0-6L-0). An intermediate design course intended to meet special teaching needs not otherwise satisfied under existing course offerings.

Prerequisite: consent of Department.

**DES 483 Seminar on Design Issues**

3 credits (either term, 0-3s-0). Contemporary design issues in the fields of theory, criticism, history, professional practice and social concerns.

Restricted to third-year Bachelor of Design students.

Prerequisite(s): ARTH 209 and/or consent of Department.

**DES 484 Integrative Design Principles and Practices I**

3 credits (first term, 0-6L-0). Studio-based course which integrates Visual Communication Design and Industrial Design concepts and practices. Individual and group projects address subjects including: signs, symbols, and communication; as well as products, packaging, and graphics.

Prerequisites: DES 370 (Industrial Design) or DES 390 and consent of Department.

**DES 485 Integrative Design Principles and Practices II**

3 credits (second term, 0-6L-0). Studio-based course which integrates Visual Communication Design and Industrial Design concepts and practices. Individual and group projects address subjects such as point of purchase displays and retail environments, combining 2-D and 3-D considerations.

Prerequisites: DES 370 (Industrial Design) or DES 390 and consent of Department.

**DES 490 Concepts and Systems in Visual Communication Design**

6 credits (two term, 0-6L-0). Systematic approaches to typographic, graphic and diagrammatic communication, image creation and manipulation. Introduction to the computer as a tool for language and visual communication. Black and white photography. Project management and research.

Prerequisites: DES 390 and consent of Department.

**DES 495 The Image I**

3 credits (first term, 0-6L-0). Further studies in the use of the photographic image in the design context. The communicative function of the image. Representation, description, expression and persuasion. History and theory of the use of images.

Prerequisites or corequisites: DES 490 and consent of Department.

**DES 496 The Image II**

3 credits (second term, 0-6L-0). Complex image creation for communicational purposes mainly in electronic media. Introduction to criticism.

Prerequisites or corequisites: DES 490 and consent of Department.

**DES 497 Advanced Typography**

3 credits (either term, 0-6L-0). Typography in the context of language communication. Design of letterforms. The study of notation schemes. The history of letterforms, history of printing and book design.

Prerequisite or corequisite: DES 490 and consent of Department.

**DES 498 Information Design**

3 credits (either term, 0-6L-0). Text, tables, charts, diagrams and electronic displays. User-machine interaction: perception and cognition. Visual presentation of abstract and quantitative information.

Prerequisite or corequisite: DES 490 and consent of Department.



**DES 525 Word and Image: Advanced Projects in Printmaking for Designers and Artists**  
6 credits (two term, 0-6L-0). Exploration of the multiple relationships between word and image generated through consideration of text.

Prerequisite: DES 425 or ART 425.

Note: Registration priority will be given to BDes Printmaking Route students.

**DES 537 Special Projects in Studio Disciplines**

6 credits (two term, 0-6L-0). Special projects in studio disciplines by special arrangement with the Department.

Prerequisite: consent of Department.

**DES 538 Special Projects in Studio Disciplines**

3 credits (either term, 0-6L-0). An advanced design course intended to meet special teaching needs not otherwise satisfied under existing course offerings.

Prerequisite: consent of Department.

**DES 584 Integrative Design Applications I**

3 credits (either term, 0-6L-0). A 2-D/3-D studio-based course in which projects address the research, development and fabrication requirements of educational and interpretive design, with special consideration of technological and cultural contexts.

Prerequisites: DES 484 and/or DES 485 and consent of Department.

**DES 585 Integrative Design Applications II**

3 credits (either term, 0-6L-0). A 2-D/3-D studio-based course in which projects address the research, development and fabrication requirements of commercial applications of design in specific settings, with special consideration of technological and cultural contexts.

Prerequisites: DES 484 and/or DES 485 and consent of Department.

**DES 586 Design Practicum I**

3 credits (first term, 0-6L-0). Design internship in design offices, industry, museums and other appropriate professional hosts and venues, bridging formal education and professional practice.

Prerequisite: consent of Department.

**DES 587 Design Practicum II**

3 credits (second term, 0-6L-0). Design internship in design offices, industry, museums and other appropriate professional hosts and venues, bridging formal education and professional practice.

Prerequisite: consent of Department.

**DES 590 The Practice of Graphic Design**

6 credits (two term, 0-6L-0). Applied practical projects and complex design systems. Problem definition, strategic planning, project management and design evaluation. Project brief and production specifications, professional practice, procedures, codes of ethics, pricing and intellectual property.

Prerequisites: DES 490 and consent of Department.

**DES 595 Communication Design for Interactive Media I**

3 credits (first term, 0-6L-0). Design for information, education and instruction using multimedia, navigation, interface design in the context of human-machine interaction. Complex information systems, project planning and development strategies.

Prerequisites or corequisites: DES 590 and consent of Department.



**DES 596 Communication Design for Interactive Media II**

3 credits (second term, 0-6L-0). Design issues in new communication media. Open information structures and networks as complex hierarchical systems. Internet as an information resource, research tool and mass communication media. Navigation, interaction and interface design in hypermedia.  
Prerequisites: DES 592 and consent of Department; corequisite: DES 590.

**DES 597 Design Management**

3 credits (either term, 0-6L-0). Project and office management. Design methods and evaluation, systems theory, writing for design. Introduction to marketing and social marketing, motivational and audience studies.

Prerequisite or corequisite: DES 590 and consent of Department.

**DES 692 Visual Communication Design: Concepts, Analysis and Criticism**

10 credits (either term, 0-18L-0).

**DES 693 Visual Communication Design: Conceptual Analysis and Practical Applications**

10 credits (either term, 0-18L-0).

**DES 695 Visual Communication Design: Directed Readings**

3 credits (either term, 0-3s-0).

*Art*

**ART 132 Visual Fundamentals**

6 credits (either term, 0-12L-0). Studio-based course providing BFA and BDes students with an introduction to the exploration and production, in two and three dimensions, of visually-expressed information.

Note: Restricted to BFA and BDes students.

Note: Full course offered in the Fall.

**ART 133 Visual Fundamentals**

6 credits (either term, 0-12L-0). Studio-based course providing BFA and BDes students with further concentration in the exploration and production, in two and three dimensions, of visually expressed information.

Prerequisites: ART 132 and consent of Department.

Note: Full course offered in the Winter.

**ART 140 Drawing I**

3 credits (either term, 0-6L-0). Study of the principles and techniques of drawing.

Pre- or corequisites: ART 132 and consent of Department.

Note: Restricted to BFA and BDes students.

**ART 322 Printmaking: Introductory Studies I**

6 credits (two term, 0-6L-0). Introduction to the principles and technical applications of printmaking through the study of screen printing, intaglio and relief process.

Prerequisites: ART 131 or 132 and consent of Department.

**ART 340 Drawing II**

3 credits (either term, 0-6L-0). Development and application of techniques and concepts of drawing with emphasis on drawing from the life model.

Prerequisite: ART 140. Note: Restricted to BFA and BDes students.



**ART 422 Printmaking: Intermediate Studies I**

6 credits (two term, 0-6L-0). Study of the principles and technical applications of printmaking with an emphasis on lithography and etching.

Prerequisites: ART 322 and consent of Department.

**ART 522 Printmaking: Advanced Studies I**

6 credits (two term, 0-6L-0). Advanced study of the principles and technical applications of printmaking emphasizing mixed media and photographic techniques.

Prerequisites: ART 422 and consent of Department.

**ART 630 Seminar in Related Disciplines**

3 credits (two term, 0-1s-0).

*Art History***ART H 101 Introduction to the History of Art I**

3 credits (either term, 3-0-0). Introduction to Western Art and Design to the end of the 14th century by analysis of selected works and movements.

**ART H 102 Introduction to the History of Art II**

3 credits (either term, 3-0-0). Introduction to Western Art and Design from the 15th century to the present by analysis of selected works and movements.

**ART H 201 Survey of Early Christian to Ottonian Art**

3 credits (either term, 3-0-0). History of the visual arts in Europe and the Mediterranean basin from the third to the 11th century.

**ART H 202 Survey of Renaissance Art I**

3 credits (either term, 3-0-0). History of the visual arts of the 15th and 16th centuries in Northern Europe.

**ART H 203 Survey of Northern Baroque Art**

3 credits (either term, 3-0-0). History of the visual arts of the 17th century in Northern Europe.

**ART H 204 Survey of 18th-Century Art**

3 credits (either term, 3-0-0). History of the visual arts of Europe during the 18th century.

**ART H 206 Survey of 20th-Century Art I**

3 credits (either term, 3-0-0). History of visual arts up to World War II in Europe and North America.

**ART H 209 Survey of the History of Design**

3 credits (either term, 3-0-0). Introduction to the development of design since the Industrial Revolution.

**ART H 251 Survey of Romanesque and Gothic Art**

3 credits (either term, 3-0-0). History of the visual arts in Europe from the 11th to the 14th century.

**ART H 252 Survey of Renaissance Art II**

3 credits (either term, 3-0-0). History of the visual arts of the 15th and 16th centuries in Italy.

**ART H 253 Survey of Southern Baroque Art**

3 credits (either term, 3-0-0). History of the visual arts of the 17th century in Southern Europe.



**ART H 256 Survey of 20th-Century Art II**

3 credits (either term, 3-0-0). History of the visual arts of the 20th century from World War II to the present, in Europe and North America.

**ART H 257 Survey of 20th-Century Canadian Art**

3 credits (either term, 3-0-0). History of the visual arts of the 20th century in Canada.

*Thesis*

Faculty of Graduate Studies and Research

**THES 909 Thesis Research**

0 credits (fi 18) (either term, unassigned). Represents research activity equivalent to nine credits for registration status and fee assessment purposes.

*Accounting*

Department of Accounting and Management Information Systems

Faculty of Business

**ACCTG 300 Financial Accounting**

3 credits (either term, 3-0-0). Accounting and reporting to persons outside of the organization.

Note: Not open to students registered in the Faculty of Business.

*Anthropology*

Department of Anthropology

Faculty of Arts

**ANTHR 101 Introductory Anthropology**

3 credits (either term, 3-0-0). General introduction to Anthropology through the study of central concepts and key issues. Human evolution, the appearance of culture, social organization, cultural theory, symbolic systems, culture change.

**ANTHR 110 Gender, Age, and Culture**

3 credits (either term, 3-0-0). An anthropological review and comparison of cultures in terms of social positions based on differences in sex and age.

**ANTHR 207 Introduction to Social and Cultural Anthropology**

3 credits (either term, 2-1s-0). Comparative study of human society and culture, particularly non-Western communities, with special attention to the family, social structure, economics and political institutions, and religion; processes of change.

Prerequisite: A 100-level course in anthropology or consent of Department.

*Computing Science*

Department of Computing Science

Faculty of Science

**CMPUT 201 Practical Programming Methodology**

3 credits (either term, 3-0-3). Introduction to the principles, methods, tools, and practices of the professional programmer. The lectures focus on the fundamental principles of software engineering based on abstract data types and their implementations. The laboratories offer an intensive apprenticeship to the aspiring software developer. Students use C and C++ and software development tools of the UNIX environment. Prerequisite: CMPUT 115; corequisite: CMPUT 272.



**CMPUT 204 Algorithms I**

3 credits (either term, 3-0-1). The first of two courses on algorithm design and analysis, with emphasis on fundamentals of searching, sorting, and graph algorithms. Examples include divide and conquer, dynamic programming, greedy methods, backtracking, and local search methods, together with analysis techniques to estimate program efficiency.

Prerequisites: CMPUT 115, CMPUT 272; MATH 113, 114, or 117.

**CMPUT 229 Computer Organization and Architecture I**

3 credits (either term, 3-0-3). General introduction to number representation, architecture and organization concepts of von Neumann machines, assembly level programming, exception handling, peripheral programming, floating point computations and memory management.

Prerequisite: CMPUT 115; corequisite: CMPUT 201.

**CMPUT 411 Introduction to Computer Graphics**

3 credits (either term, 3-0-3). 2-D and 3-D transformation; 3-D modeling and viewing; illumination models and shading methods; texture mapping, ray tracing.

Prerequisites: CMPUT 204, 301 and MATH 120.

*Consumer Studies*

F

Department of Human Ecology

Faculty of Agriculture, Forestry, and Home Economics

**CONS 220 Fundamentals of Consumer Behavior**

3 credits (either term, 3-0-0). Study of factors affecting the consumer decision process, analysis of consumer behavior models, and their application to consumer policy, consumer education, and marketing. Prerequisite: ECON 101 or completion of an approved economics module available from the Department of Human Ecology.

*Economics*

Department of Economics

Faculty of Arts

**ECON 101 Introduction to Microeconomics**

3 credits (either term, 3-0-0). How markets and governments determine which products are produced and how income is distributed in the Canadian economy.

*English*

Department of English

Faculty of Arts

**ENGL 101 Critical Reading and Writing**

6 credits (two term, 3-0-0). A critical study of literature in English, concentrating on works written since 1800, with a minimum 30% of class time devoted to writing instruction.

*Interdisciplinary Undergraduate Courses*

Faculty of Arts

**INT D 200 Introduction to Studies in Science, Technology and Society**

3 credits (either term, 3-0-0). An examination of the interrelations of science, technology, society and environment, emphasizing an interdisciplinary humanities and social sciences perspective. Both theoretical and practical issues are addressed, using historical and contemporary case studies.



*Marketing*

Department of Marketing, Business Economics, and Law  
Faculty of Business

**MARK 301 Introduction to Marketing**

3 credits (either term, 3-0-0). Students are introduced to the marketing concept and the role of marketing within the overall business framework. The basic tools of marketing are introduced: market segmentation, positioning, product, price, distribution, and promotion, together with marketing research, consumer behavior, planning, and global marketing. A critical theme of the course is the need for the marketing mix to fit with the requirements of consumers, the competitive environment, company strengths, and community expectations. These issues are considered from strategic and tactical perspectives.

Prerequisites: ECON 101/102, MATH 113 or equivalent.

**MARK 432 Marketing Communications**

3 credits (either term, 3-0-0). Students study basic concepts of interpersonal and mass communications. An emphasis on integrated marketing communications (IMC) which consist of advertising, personal selling, sales promotion, direct marketing, and public relations. A focus on integrating the elements which make up an IMC plan, resulting in a coherent communications strategy. Consumer motivation and the measurement of communication effectiveness are also examined.

Prerequisite: MARK 301.

*Mathematics*

Department of Mathematical Sciences  
Faculty of Science

**MATH 113 Elementary Calculus I**

3 credits (either term, 3-0-1). Review of analytic geometry. Differentiation and integration of simple functions. Applications.

Prerequisite: Pure Mathematics 30 or equivalent.

**MATH 114 Elementary Calculus I**

3 credits (either term, 3-0-0). The course description is the same as for MATH 113.

Prerequisites: Pure Mathematics 30, Mathematics 31 or equivalent.

**MATH 115 Elementary Calculus II**

3 credits (either term, 3-0-0). Differentiation and integration of trigonometric, exponential and logarithmic functions. Indeterminate forms and improper integrals. Techniques of integration. Application.

Prerequisite: MATH 113 or 114, or equivalent.

*Organizational Analysis*

Department of Organizational Analysis  
Faculty of Business

**ORG A 431 New Venture Creation and Organization**

3 credits (either term, 3-0-0). This course explores how small businesses are created and operated. Topics include the entrepreneurial process, opportunity recognition, business planning, mobilizing resources and organization creation.

Prerequisite: FIN 301.



*Psychology*

Department of Psychology  
Faculty of Arts

**PSYCO 104 Basic Psychological Processes**

3 credits (either term, 3-0-1/4). Principles and development of perception, motivation, learning, and thinking and their relationship to the psychological functioning of the individual. The course is a prerequisite to most courses in the department and is normally followed by PSYCO 105.

**PSYCO 105 Individual and Social Behavior**

3 credits (either term, 3-0-1/4). Introduction to the study of human individuality, personality, and social psychological processes. Some aspects of normal and abnormal human development, psychological assessment and treatment may be reviewed.

Prerequisite: PSYCO 104.

**PSYCO 212 Introduction to Research Methods in Psychology**

3 credits (either term, 3-0-0). Experimental and nonexperimental methods in psychology. Topics covered include philosophy of science; measurement; reliability and validity of methods, measures, and effects; experimental, quasi-experimental, and single-subject designs; biases in experimentation; and research ethics.

Prerequisites: PSYCO 104, 105, and STAT 151 or former PSYCO 211.

*Sociology*

Department of Sociology  
Faculty of Arts

**SOC 100 Introductory Sociology**

3 credits (either term, 3-0-0). An examination of the theory, methods, and substance of Sociology. The study of how societies are shaped including economy, culture, socialization, deviance, stratification, and groups. The process of social change through social movements, industrialization, etc.

Prerequisite: First or second year standing.

**SOC 210 Introduction to Social Statistics**

3 credits (either term, 3-0-2). Statistical reasoning and techniques used by sociologists to summarize data and test hypotheses. Topics include describing distributions, cross-tabulations, scaling, probability, correlation/regression and non-parametric tests.

Prerequisite: One of SOC 100 or 300.

**SOC 241 Social Psychology**

3 credits (either term, 3-0-0). An introduction to the study of individual and group behavior observed in social processes.

Prerequisites: One of SOC 100 or 300, or PSYCO 104 or 105, EDPSY 163 or 371.



## APPENDIX B: CALIFORNIA INSTITUTE OF THE ARTS

### Course Listings Graphic Design Program

#### AG101A&B Graphic Design

Semester units: 6; semester offered: I, II. Two-semester sequence.

An introduction to the construction of ideas in design. Using graphic projects as a base, this course will cover the following aspects of design practice: methodology (problem-solving, critical analysis, basic design vocabulary, semiotics of visual design, as well as verbal, research and editing skills); and tools (sketching/drawing, basic formal skills, graphic arts processes, and presentation techniques).

#### AG104 Design Issues

Semester units: 2; semester offered: I

An exploration of the theory and practice of Graphic Design. Readings, discussion and research will map out an introduction to the design profession, its history, theory and practices.

\*Required of first year Graphic Design students.

#### AG110 Skills for Visualization

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Semester units: 2; semester offered: I

A workshop in the basic concepts and techniques of drawing and its applications in graphic design.

Formal techniques will include perspective, sketching, and technical applications of tools.

\*Required of first year Graphic Design students.

#### AG111A Macintosh for Designers

Semester units: 2; semester offered: I

#### AG111B Macintosh for Artists

Semester units: 2; semester offered: II

A survey course with a hands-on approach toward developing a Mac literacy. Hardware instruction will include input and output devices on specific, to multi-purpose, computer workstations. Software applications will include the operating system, page layout and digital production (Quark Xpress), image manipulation (PhotoShop), telecommunications and a brief introduction to multimedia. The class is designed for students with limited or no previous Mac experience.

\*Required of first year Graphic Design students.

#### AG201A&B Graphic Design II

Semester units: 6; semester offered: I, II

Two semester sequence. Further development of concepts and forms in graphic design. This course will continue to focus on methodology (evaluation of design case studies, semantic/ semiotic analysis, organization of complex projects) and tools (more complex formal skills, pragmatic typographic skills, continuing photographic and graphic processes, electronic media, working with typesetters and printers). Projects will synthesize methods and tools, with a special emphasis on complex problems in traditional graphic design practices.

#### AG215A&B Typography I & II

Semester units: 3; semester offered: I, II

Two semester sequence. An introduction to the fundamentals of typography. A brief introduction to calligraphy, metal type, and letterform construction. Projects will focus on the understanding of: hierarchy through letter, word, and line spacing; traditional and modern page structure and proportion; book and magazine layout design.

\*Required of second year Graphic Design students



**AG221A&B Basic Photography for Graphic Design**

Semester units: 3; semester offered: I, II

An introductory course in photography designed to foster technical competency and visual literacy in making photographs. Course will consist of lectures, discussions, readings, and laboratory work.

\*Required of first year Graphic Design students.

**AG275 Digital Type Design**

Semester units: 2; semester offered: II

A brief survey of the historical development of type design to the present. Using Fontographer 4.0, students will design at least one complete display face and one text face with 240 characters, including corrected spacing, kerning and edit screen fonts.

**AG301A&B Graphic Design III**

Semester units: 6; semester offered: I, II

A variety of projects focus on issues concerning graphic design and its relation to popular culture via various means: posters, publications, broadcast, printed and electronic matter. The course introduces students to the realm of the practicing professional designer and calls on them to both conquer, and simultaneously question, that world.

**AG311 Advanced Macintosh for Designers**

Semester units: 2; semester offered: I

This class covers specialist areas related to working on the Macintosh, especially in relation to new media. Through practical projects topics discussed vary from Lingo programming and HTML, to Digital Audio, and web design, the emphasis of the class is on the relationship between technology and design.

**AG315A&B Typography III & IV**

Semester units: 3; semester offered: I, II

An exploration of the connotative and denotative nature of text, through systems of hierarchy and composition.

\*Required of third year Graphic Design students.

**AG321A Imagemaking I**

Semester units: 2; semester offered: II

This course will investigate the vocabulary, syntax, concepts and formal qualities to consider when creating a visual representation of an idea. Through class assignments and discussions, practice creating and conveying, manipulating and sequencing meaning and metaphor. There will be an emphasis on process, conceptual thinking and technical aspects of generating images for digital and print projects.

\*Required of second year Graphic Design students.

**AG321B Imagemaking II**

Semester units: 2; semester offered: I

An advanced study of means of communication and representation within visual/graphic/popular culture. The class is made up of a series of related projects and weekly discussions concerning the outcome of these explorations.

**AG330 Beginning Multimedia**

Semester units: 2; semester offered: I

An introductory class to the ideas surrounding the practice of self-publishing on the web, exploring the space where the roles of designer, author, programmer, image maker and content provider are blurred, merged or redefined. The class covers basic web creation skills hand-in-hand with fostering conceptual development and content creation.



**AG350A&B Graphic Design Workshop**

Semester units: 2; semester offered: I, II

With faculty supervision, students design and produce posters and collateral material for CalArts events, along with theoretical projects that address specific design and production problems. The course meets once a week for a design critique of projects in various stages of production. Students in this course must accept responsibility for working on tight production schedules and as a cooperative group in order to meet the CalArts deadlines.

\*Prerequisite: Third year, fourth year or graduate status in Graphic Design program.

**AG370 Advanced Multimedia**

Semester units: 2; semester offered: II

An in-depth look at issues concerning creating design for on-screen consumption. Throughout the semester the class views and discusses various websites, CDROMs and broadcast graphics, culminating in the creation of a screen based piece of design that discusses/resolves some of these issues.

**AG401A&B Graphic Design IV**

Semester units: 6; semester offered: I, II

This course aims to extend the student's conceptual approach to the practice of design. The refinement of formal skills will be related to basic issues of the representation and communication of meaning, through independent projects proposed by each student. Weekly meetings in seminar form will critique the on-going independent and assigned projects.

**AG410 Publication Design**

Semester units: 2; semester offered: I

Sequential design dealing with experimentation, pacing, scale and conceptual organization of diverse visual material and text, as well as the exploration of various formats.

**AG430 Social Design**

Semester units: 2; semester offered: II

Graphic Design is explored as social activism. The motivations for activism, intentionality and denial in graphic design, the context of graphic design and its economic and market based underpinnings. Topics include: Issues of representation and cultural design; Design that is overtly political (Historic examples followed by contemporary practice: Gerard Clavel, Gran Fury, Tibor Kalman, Robbie Conal) Implications of a "designed" world.

**AG440 Information Design**

Semester units: 2; semester offered: I

Rigorous visual logic will be applied to informational problems. This logic provides the basis for the development of structured, systematic typographic solutions. The nature of the project provides a rich forum for original thinking and expressive work.

**AG450 Professional Practice for Graphic Designers**

Semester units: 2; semester offered: II

This one semester course will consist of weekly field trips and/or visits with printers, typesetters, labs, production houses, design studios, paper sales representatives, etc., to acquaint participating students with all aspects of the professional level production of graphic design. Special emphasis will be on current production techniques in contemporary design practice.

\*Required of fourth year Graphic Design students.

**AG461 Graphic Design Theory**



**AG461A Advanced Concepts in Criticism**

Semester units: 2; semester offered: I

**Theory and Graphic Design**

Two-thirds of this semester will be focused on the in-depth exploration of a single contemporary issue, looking closely at the history of particular notions that arise. In the last one-third of the semester students will conduct an independent research project.

\*Prerequisite: AG360A

\*Open to MFA-2 and BFA-4 Graphic Design students by permission of instructor.

**AG461B Introduction to Criticism, Theory and Graphic Design II**

Semester units: 2; semester offered: II

This semester is an introduction to the kinds of criticism and theory that have been pertinent to graphic design in the Twentieth Century, based on an overview of the relationship between language and vision as it has been theorized by various schools and critics from a wide range of disciplines. An emphasis is placed on the relevance of such notions to the making and reading of graphic design.

\*Open to MFA-2 and BFA-4 Graphic Design students by permission of instructor.

**AG475 Digital Production for Graphic Design**

Semester units: 2; semester offered: II

Class assignments will document the process involved in preparing graphic art for printed media. Students will methodically work through a project: defining requirements and expectations, organizing materials, making design decisions, investigating production methods and expenses, readying files for output and finally negotiating and purchasing high resolution output.

\*Required of second year Graphic Design students.

**AG510A&B Graduate Seminar I: Graphic Design**

Semester units: 6; semester offered: I, II

Throughout the year, the seminar is structured around a sequence of studio projects intended to expand theoretical and practical approaches to design. Studio problems will become the focus of critiques, lectures, and presentations connecting class production to larger issues in design. The goal is not only to develop personal direction in terms of the problem, but to expand the student's understanding of the entire context of design. In the spring, the sequence of studio problems continues; students assume responsibility for making presentations based on research throughout the year.

**AG550 Visual Literacy**

Semester units: 6; semester offered: I, II

An interdisciplinary approach to design studies which emphasizes the basic principles of graphic design, visual logic in terms of composition, typography, information design. The course also considers individual and public dimensions of producing design within a social, political, and economic context.

**AG550A&B Visual Literacy**

Semester units: 6; semester offered: I, II

A year-long/required studio/seminar for provisional MFA candidates in graphic design. Semester I explores design fundamentals and methodology. Semester II explores design as research and personal investigation.

**AG550C Visual Literacy**

Semester units: 3; semester offered: I, II

An Institute-wide elective open to non-design majors. Students are required to attend a minimum of 6 hours per week.

\*Permission of instructor required.



### AG560 Motion Graphics

Semester units: 2; semester offered: I

This course explores the effect of time and motion upon traditional typography, and examines the significance of motion upon the reading, as well as the making, of graphic communication. The class uses both digital and hi-8 video to experiment and make typographically based work for broadcast and/or cinema.

Basic knowledge of the Macintosh computer and basic design skills are essential.

\*Permission of instructor required.

### AG570 Typographics

Semester units: 2; semester offered: I, II

This studio course explores current issues in typographic practice - historic and contemporary practice, as well as the relationship between typography and writing.

\*Required course for MFAs and PMFAs.

\*Permission of instructor required.

### AG601A&B Graduate Seminar II: Graphic Design

Semester units: 6; semester offered: I, II

The main purpose of this seminar is a weekly discussion of theoretical and critical issues in design, particularly relating to independent projects and the graduate project.



## APPENDIX C: CARNEGIE MELLON UNIVERSITY

### Course Listings Department of Design

#### First Year *Studio Experience*

##### 51-101 Design Studio I

This studio course introduces students to the fundamentals of two- and three-dimensional design. Through a wide range of exercises and projects students explore what it means to communicate with form and images. The course will cover the use of visual and physical elements in design, with emphasis placed on idea and form development, visual organization, construction, understanding materials, and considering how people draw meaning from form.

Prerequisite: professional program status

Fall: 9.0 units

##### 51-102 Design Studio II

This course is designed to provide a series of experiences that prepare students for a major in Industrial or Communication Design. Through the exploration of form and content students begin to develop their abilities to design in more complex social situations. This course seeks to develop perceptual and expressive abilities that allow for thorough interpretation of design problems. Students work as individuals and as members of teams to develop an understanding of design process. Student evaluation is based on faculty critique of projects at different stages of development in a studio setting, with the participation of students.

Prerequisite: professional program status

Spring: 9.0 units

#### *Ideas & Methods of Design Practice*

##### 51-121 Design Drawing I: Representation and Expression

Drawing is an essential tool that designers use to communicate, develop, and test their ideas. This basic drawing course is designed to introduce students to a variety of drawing approaches related to the design process. Students learn methods of representation, communication, idea generation, and form development. A sequential approach to the understanding of structure, form, space and the effects of light through the use of line, tone and texture will be stressed. Students will be introduced to a variety of simple drawing media. Drawing in this context is viewed as a means of design thinking, with emphasis placed on the analysis and interpretation of existing man-made and organic forms. Demonstrations and group and individual critiques augment concepts presented in class.

Prerequisite: professional program status

Fall: 9.0 units

##### 51-122 Design Drawing II: Perspective and Diagramming

This course introduces drawing systems and diagrammatic conventions while further developing the principles covered in Design Drawing I. Exploration, analysis, refinement and communication of design concepts are the main issues covered in this course. Perspective systems and diagramming are used to understand, communicate and express various forms of information. Projects reinforce freehand sketching and provide the basis for introduction to more complex drawing media. Demonstrations and group and individual critiques reinforce concepts presented in class.

Prerequisite: Design Drawing I and professional program status

Spring: 9.0 units



**51-131 Computer Skills Workshop**

Introduction to fundamentals of computer operation and software.

Prerequisite: professional program status or permission of instructor

Fall: 3.0 units

**51-132 Introduction to Photography in Design**

Introduction to photography for designers through slide-making. Using color slide film, students learn how to extend their 'seeing' with the camera, both in the world and in a shooting studio. Through shooting assignments in the world we will see how photography is another means of image-making for designers who need to know how to read photographs as well as how to make them. In the shooting studio, students will learn basic documentation skills and how to make slide portfolios of their two-dimensional and three-dimensional work. In addition to making photographs, we will look at different kinds of existing photographic imagery--e.g. documentary, advertising, scientific, fine art--to gain an overview of the medium and learn how photographs effectively communicate information. Shooting assignments in and out of the studio, critiques, library research. Required for all design majors.

35mm camera necessary.

Prerequisite: professional program status or permission of instructor

Spring: 9.0 units

*Design Studies: History, Theory, Criticism*

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**51-171 Human Experience in Design**

This course introduces the central theme of design and the design professions: the importance of human beings in all aspects of design thinking and practice. We will begin by exploring design and the human dimension, discussing the nature of human beings and their physical, psychological, and spiritual or cultural needs. Then, we will consider the role of human beings in the design process, exploring how designers respond to human needs and issues of value. Finally, we will discuss the scope of design in our personal, social, and cultural environment, observing how thoroughly design has permeated our lives through images, physical objects, services, and environmental systems, extending even to a profound impact on the ecological system of the planet. This is the first course in the Design Studies sequence of the department. Lectures, discussions, and written assignments, with readings and extensive visual materials. Required for all design majors.

Prerequisite: professional program status or permission of instructor

Fall: 9.0 units

**51-172 Introduction to Design Thinking**

Introduction to important ideas that have shaped industrial and communication design as humanistic disciplines. Topics include the definition of design, the place of design among the arts and sciences, the differences among kinds of design practice, and the meaning of concepts such as product, client, community of use, function, form, material, style, craft, and mass production, as they are understood and used by designers. We will also discuss some of the central issues in design studies, including gender and diversity, ethics and politics, and the role of design in society. This course provides an overview of the ideas behind the programs of the design department at Carnegie Mellon. Extensive readings, visual materials, and writing assignments. This course also introduces the techniques of concept mapping and formal skills of group process. Lectures and discussions.

Prerequisite: Professional Design program status or permission of the instructor

Spring: 9.0 units

**51-173 History of Art**

An introductory survey of major developments in the history of the visual arts.

Prerequisite: professional program status or permission of instructor

Fall: 9.0 units



## Second Year *Studio Experience*

### 51-201 Basic Typography: CD Studio I

This is the first studio for students in the communication design program. Students explore the fundamental principles of typography, where type is regarded as an image that serves a variety of communicative purposes. Projects allow students to explore issues of form and meaning, hierarchy, legibility and readability, structure and composition, and the design process. While typography is a highly focused branch of communication design, this introduction to type as image serves to open a path for students to study all facets of communication design in subsequent courses. Students use both traditional materials and design tools as well as computers. Special tutorials provide basic instruction in software such as QuarkXPress and Adobe Illustrator. In addition, we will also discuss some of the key figures, philosophies, and technologies that have shaped typography. The course will also include a demonstration of letterpress operation in the Design Department's Lab Press and a guided visit to the Hunt Library's Rare Book Room.

Prerequisite: Professional program status

Fall: 9.0 units

### 51-202 Intermediate Typography: CD Studio II

The theme of this course is the integration of type and image. The primary goal of the projects is how to achieve a harmonious and effective interplay of typography and imagery to express meaning. Through a confident use of grids, color, images, type, and visual hierarchy, students will explore a variety of solutions to design problems that require both expressiveness as well as an understanding of the practical uses of communication design. With an emphasis on formal and semantic issues, assignments will demonstrate how typography, photography, and other forms of image making may be combined to shape the form and content of communication.

Prerequisite: Basic Typography I

Spring: 9.0 units

## *Ideas & Methods of Design Practice*

### 51-221 Communication Design Darkroom I

This mini-course is an introduction to black and white photography through the darkroom. In addition to covering technical skills that include film exposure/development and print enlargement, major emphasis is placed on the language of the photographic medium and how it communicates information.

Through shooting exercises, darkroom work, oral presentations and critiques, photography is explored as both a medium of personal expression and as a visual language, the understanding of which is indispensable to communication designers who make and work with images. Extensive shooting and darkroom work, library research. Required for communication design majors. 35mm camera necessary.

Prerequisite: professional program status or permission of instructor

Fall: 4.5 units

### 51-222 Color and Communication

As a communication tool, color can signal, enhance, and speak in ways that type and images cannot. Combined with type and images, color can contribute to the persuasive and communicative force of design. Beginning with a perceptual understanding of color, this course will explore the many ways that color communicates. Students will work with traditional materials and tools as well as computers to understand the strengths and limitations of each, comparing their similarities and differences in the context of theoretical and applied projects.

Prerequisite: Professional program status

Spring: 9.0 units



**51-223 Computer Basics**

Mini-course in basic software and computer operations, with particular emphasis on the needs of communication designers.

Prerequisites: Computer Skills Workshop, professional program status, or permission of instructor  
 Spring: 4.5 units

**51-225 Communication Design Darkroom II**

A continuation of Communication Design Darkroom I, for students who want further exploration of photography and design. After acquiring basic darkroom skills in Darkroom I, students work in-depth on photographic projects. Oral presentations on issues in photography and critiques continue. Extensive shooting and darkroom work. 35mm camera necessary.

Prerequisite: Communication Design Darkroom I

Fall: 4.5 units

**51-231 Introduction to Calligraphy I**

Working with pure unadorned Roman letterforms, this course will introduce the student to the theory and practice of hand-generated letters, employing a variety of mark-making tools. This course provides an in-depth understanding of the basic principles and techniques of the art of formal writing. Rhythm, texture and composition are achieved through routine, elementary exercises using geometric forms, demanding concentration and manual discipline with the development of hand-eye coordination. The function, use, and harmonious sequencing of letterforms will be taught through weekly projects. Awareness of rhythm, texture and letterform structure are achieved through routine exercises. Drills, demonstrations, discussions, individual and class critiques are on-going. Additional related topics and activities introduced in class include Books: binding and design. Brief introduction to the historical development of our Western alphabet through film, slides, demonstrations, with discussion of twentieth-century type designs. Letter vocabulary, paleography, monoprints, words and punctuation. Classical page design. Publications past and present. Calligraphy's role in design today. Thinking with hands and eyes, the manual placement and spacing of letters practiced in this course awakens sensitivity and judgment in the designer.

Prerequisite: none

Fall: 6.0 units

**51-232 Introduction to Calligraphy II**

Continuation of Introduction to Calligraphy I. Advanced problems in calligraphy and lettering. New hands are introduced, to be decided by student and instructor.

Prerequisite: Introduction to Calligraphy I or permission of instructor

Spring: 6.0 units

**51-261 Communication Design Fundamentals**

A one-semester course that introduces non-majors to the field of communication design. Through studio projects, lectures, and demonstrations, students become familiar with the visual and verbal language of communication designers, the design process, and the communicative value of word and image.

Prerequisite: Macintosh proficiency

Fall: 9.0 units

*Design Studies: History, Theory, Criticism***51-271 Design History I**

This course provides an overview of design history from 1850 to 1950, the critical period for the formation and development of design and the design professions. There are three primary goals. The first is to provide an understanding of the role that design has played in the evolution of the competitive free market system at national and global levels. The second goal is to demonstrate how design emerged as a



powerful tool for corporate and cultural identity in this period. The third goal is to develop an understanding of some of the basic influences on the formation of design theory and practice in the twentieth century. This is accomplished through the presentation and discussion of primary economic and cultural forces, philosophical ideas, artistic and social movements, and significant individuals and artifacts that represent the period. The course traces both the chronological and the contextual development of design, providing students with an understanding of design as an evolving concept.

Prerequisite: none

Fall: 9.0 units

### 51-272 Design History II

This course focuses on the development of design from 1950 to the present, with further exploration of the themes introduced in Design History I as well as the introduction of new themes that have emerged to influence the direction of design thinking. The themes range from ideas to artifacts, from the political poster to the chair, and from the personal visions of individual designers to the needs and expectations of society. The course explores the relationship between design and gender, race, the environment, political systems and national economies. Students develop an in-depth understandings of these themes through lecture, research and presentations. This course completes the design department's history core and serves, as does Design History I, as a resource for work in design studio courses. It is also a preparation for Contemporary Design, a later course in the Design Studies sequence, as well as advanced topics courses in Design Studies.

Prerequisite: none

Spring: 9.0 units

### Third Year

#### *Studio Experience*

### 51-301 Advanced Typography: CD Studio III

This course develops advanced skills in typography and communication design, including the study of type and motion. Students learn to conceptualize and visualize more complex bodies of information for a variety of communicative purposes. Projects encourage students to develop a deeper understanding of the expressive potential of type and image and to develop critical and creative thinking skills with which to assess the effectiveness of their own work and that of their peers. Course objectives are to encourage an active exchange of ideas and information which allow students to develop the ability to clearly articulate their ideas and thought processes in relation to their work. This leads to a more focused method for developing and expressing ideas effectively.

Prerequisite: Basic Typography and Intermediate Typography

Fall: 9.0 units

### 51-302 Information Design: CD Studio IV

The world is complex, and we have made it so. This course is a creative venture that deals with complexity, in particular the complexity of visual data that surrounds us in our daily lives. From train schedules to tax forms to the user guide for a VCR, humans have created a typographic labyrinth within which we are often lost while looking for information. This course deals with the basic principles that communication designers use when arranging complex data, making it visible and accessible, making it information. Assignments are specific, but their lessons are fundamental, providing students with the conceptual and visual tools that will help them solve any information design problem.

Prerequisite: Basic Typography, Intermediate Typography, and Advanced Typography

Spring: 9.0 units



*Ideas & Methods of Design Practice***51-321 Photography and Communication**

An advanced photo-imaging course to further develop proficiency in making and understanding photographs in the context of communication design. Photography will be seen as a medium of communication through which personal aesthetics and individual style are expressed. We will work in a variety of photo-image forms, including traditional black and white, altered, and digital. We will also explore different formats for presenting photographs, including book, collage, sequence. In addition, we will examine photography from the nineteenth century to the present to understand how the medium has evolved and how individuals have used photography for personal expression. Extensive shooting and darkroom work, library research. 35mm camera necessary.

Prerequisite: Communication Design Darkroom I

Fall: 9.0 units

**51-322 Pre-Press Production Methods**

A lecture/lab exploration of the processes and materials of the printing industry as they support and condition the work of the communication designer. The role of electronic publishing tools in the preparation of finished art will be emphasized. Field trips to a printer and an electronic pre-press facility, as well as guest lectures from industry, keep this course up-to-date.

Prerequisite: Professional program status

Spring: 9.0 units

**51-323 Drawing and Communication**

This course explores drawing as a means of communicating and expressing ideas. We will explore drawing by hand, but there will be some integration of other imaging technologies. Themes will center around objects, people, and places in various contexts. Emphasis is placed on individual interpretation and exploration of the assigned projects. Each project has several components that cause the student to generate and develop ideas as they work towards more refined images. Specific conceptual and technical skills will be discussed both individually and in groups as students examine the relationship between images and meaning.

Prerequisite: Professional program status or permission of the instructor

Fall: 9.0 units

**51-324 Basic Prototyping Methods (for Communication Designers)**

A half-semester laboratory mini-course introducing a range of materials, methods, and workshop techniques by which designers prototype designs in three dimensions. Basic competence in shop techniques is established by bringing to realization a series of simple artifacts. Studio and model shop tools are required: lab fee.

Prerequisite: professional program status or permission of instructor

Spring: 4.5 units

**51-325 Signs, Symbols, and Marks**

This course focuses on the formal development of pictorial signs (icons, symbols, marks, etc.) either as individual elements or as families and systems of compatible forms. Through a variety of projects, students will employ an analytical process that includes research, observation, idea generation, development, selection, and refinement of images. We will explore the personal, social, and cultural messages that such images carry. There will be applications in two- and three-dimensional formats.

Prerequisite: Third- or fourth-year professional program status

Fall: 9.0 units



**51-326 Documenting the Visual**

A critical look at documentary photography. We will examine 19th and especially 20th century images to see how photographers have shaped and extended a tradition that continues into the present. We will discuss theoretical issues—e.g. how cultural context influences the making and understanding of photographs; how photographers use both conscious as well as unconscious strategies in image-making; how documentary images take different forms--ranging from seemingly literal and objective descriptions, to intensely personal statements, to images coupled with text. In exploring these issues, we will look at a variety of image-types: family and candid photos, company and advertising photos, political and humanistic or social photo-essays. Extensive visual materials, readings, written and optional photo assignments. Prerequisite: Intended for students majoring in the Department of Design or the Department of English, or by permission of the instructor

Spring: 9.0 units

**51-327 Moving Images and Meaning**

Rapid developments in new imaging techniques render our environments more and more visual. We consume images every day, but spend little time analyzing their precise content, context, or meaning. This course focuses on how moving images and kinetic imaging techniques convey explicit, implicit, and often inadvertent meanings. Students explore the perceptual workings, psychological impact, cultural conventions, and the use and abuse of visual media. In addition to developing analytical skills, assignments (with video option) challenge and inspire the making of creative and effective image sequences. Prerequisite: professional program status or permission of instructor

Fall: 9.0 units

**51-331 Advanced Calligraphy I**

Continued study in the discipline of calligraphy. (Meets with Introduction to Calligraphy I.) Two directions may be taken. (1) Enlarging the student's repertoire of scripts, contemporary or traditional, for use in limited areas of work such as book or display work. (2) Concentrating on more intensive problem solving using a limited repertoire of scripts such as Roman, Italic, Sans Serif.

Prerequisites: Calligraphy I and Calligraphy II, or permission of instructor

Fall: 6.0 units

**51-332 Advanced Calligraphy II**

Continued study in the discipline of calligraphy. (Meets with Introduction to Calligraphy II.) Advanced problems or new direction determined by student and instructor.

Prerequisite: Calligraphy I , Calligraphy II, and Advanced Calligraphy I, or permission of the instructor.

Spring: 6.0 units

***Design Studies: History, Theory, Criticism*****51-371 Topics in Design Studies**

Topics courses address important themes in the history, theory, and criticism of design. Offerings vary from year to year. Lectures and discussions. Extensive readings.

Prerequisite: none

Fall: 9.0 units

**51-372 Contemporary Design**

This course presents important issues, ideas, trends, and movements in contemporary design. The objective is to encourage an active exchange of ideas and information which broaden and deepen our conception of design, develop a clearer understanding of the relationship of design to society and contemporary culture, strengthen critical and creative thinking skills, strengthen the student's ability to articulate and support his or her ideas, and gain greater familiarity with a wide range of contemporary design work and



related design issues. Extensive readings, lectures, and discussions of the work of contemporary industrial and communication designers.

Prerequisite: none

Spring: 9.0 units

### 51-373 Language in Design

This course, taught by a faculty member from the Department of English, explores the use of language in design. It is intended to help students improve their skills of writing and speaking.

Prerequisite: professional program status

Fall: 9.0 units

### *Other*

### 51-399 Junior Independent Study

Independent study allows students to pursue an individual project or research with the guidance of an advisor. The guidelines for independent study are in the Design Office. Proposals must be approved by faculty before pre-registration.

Prerequisite: 3.0 QPA minimum, professional program status, and approval by instructor.

Fall or Spring: various units

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### Fourth Year

#### *Studio Experience*

### 51-401X Team and Individual Projects

### 51-402X Team and Individual Projects

The senior year offers Design majors the opportunity to explore a variety of advanced topics through project-oriented courses. These project courses typically require an integration of skills and knowledge gained throughout the entire design program, and students in communication design and industrial design may participate in appropriate offerings, based on consultation with and approval by the instructor and faculty advisors. Applied projects for external clients give students an opportunity for interdisciplinary team work, while an individually-defined project allows for self-directed in-depth study and analysis. A senior is encouraged to do one client-related project and one individually-defined project over the course of the year. Projects and topic areas will vary each year, but the general areas that will be covered include publication design, electronic communication design, new product development, packaging, human-computer interaction design, identity systems, design for public spaces, and industrial design:

Kinetic Information Display

Maps, Diagrams, and Graphs

Exhibition Design

Design in Public Spaces

Experimental Books

Packaging and New Product Development

Virtual Identity

Environmental Communication

Prerequisite: Design senior status or permission of instructor

Fall or Spring: various

### *Ideas & Methods of Design Practice*

### 51-421 Visual Interface Design

A digital interface helps people take advantage of powerful electronic tools like computers and other machines so they can make and do things. In professional practice, designing user interfaces is a multi-disciplinary effort that draws upon diverse fields ranging from visual communication to linguistics,



cognitive psychology, computer science, and system engineering. This course is comprised of projects which highlight the role that Visual Interface Designers play in the multi-disciplinary attempt to bridge the gap between functionality (things) and usability (humans) and to introduce students to some of the unique challenges of designing within the realm of a digital, time-based medium. Students will address current interface design issues through a series of screen-based projects, each ranging in complexity and theme and placing particular emphasize on the visual and semantic aspects of design solutions. This course is open to upper-level students from the design department and other departments across campus. Programming is not required, but some familiarity with the following software applications is preferable: Photoshop 3.0 and Director 4.0.

Prerequisite: Professional program status or permission of instructor.

Fall: 9.0 units

#### 51-442 Integrated Product Development

This course provides an integrated perspective on the many processes by which new products are designed, manufactured, and marketed. Under the direction of faculty from Design, Engineering, and Industrial Administration, students will work together in interdisciplinary groups on the development of real products. In addition to the product development project, the course includes lectures on innovation strategy, opportunity identification, designing products, object representation and manufacturability rules, computer-assisted design and prototyping, concept testing and protocol analysis, redesign issues, market testing, manufacturing and production, and product introduction and management.

Prerequisite: Open to graduate and senior-level engineering students, industrial administration students, and design students.

Spring: 12.0 units

#### 51-445 Project Planning

This mini-course provides industrial design and communication design seniors with an opportunity to develop planning techniques which lead to successful and satisfying design projects. Course material is drawn from professional practice and includes subjects such as defining a project, identifying resources, allocating time, estimating cost, and organizing a project proposal. Students will produce a project plan which may be carried out as a studio project. Limited to 20 students.

Prerequisite: senior professional program status

Fall: 4.5 units

#### *Design Studies: History, Theory, Criticism*

#### 51-471 Issues of Professional Practice

This is a lecture course covering all aspects of design practice. Students learn to formulate a plan for professional practice, market creative services, manage projects, and understand the legal and ethical issues associated with design practice. This course will also address the changing role of the design professions. Visiting professionals, case studies, and supplementary readings provide resources for class discussion.

Prerequisite: none

Fall: 9.0 units

#### 51-472 Topics in Design Studies

Topics courses address important themes in the history, theory, and criticism of design. Offerings vary from year to year. Lectures and discussions. Extensive readings.

Prerequisite: none

Spring: 9.0 units



## *Other*

### 51-499 Senior Independent Study

Independent study allows students to pursue an individual project or research with the guidance of an advisor. The guidelines for independent study are in the Design Office. Proposals must be approved by faculty before pre-registration.

Prerequisite: 3.0 QPA minimum, professional program status, and approval by instructor

Fall or Spring: varying units

## *Graduate*

### 51-701 Grad Design Seminar I

#### Graduate Design Seminar I: Approaches to Communication Design

This course will explore the foundations of communication design in contemporary culture, with special emphasis on the traditions of verbal and visual communication that have begun to merge in new approaches in theory and practice. We will examine the methods and principles of rhetoric, semiotics, and other disciplines that help to explain the relationship between words and images and provide important themes to guide the practice of communication and interaction design. The course will rely on extensive readings and close analysis of concrete examples of communication and interaction design.

Prerequisite: Approval of instructor and concurrent registration in Graduate Design Studio I.

Fall: 12.0 units

Instructor: Richard Buchanan

### 51-702/51-702 A Grad Design Seminar II

#### Graduate Seminar II: Topics in Human-Computer Interaction Design

This course will explore a range of topics covered by the term human-computer interaction design. In particular, interaction design will be examined from the perspective of communication design. Through readings, presentations, and discussions, we will delve into principles of traditional and digital design, design processes and methodologies, and languages for the description of interaction design. Topics will include psychological factors, evaluative methods, intelligent interface agents, knowledge-based design systems, and the design of large information spaces.

Prerequisite: Approval of instructor and concurrent registration in Graduate Design Studio II.

Spring: 12.0 units

### 51-711 Grad Design Studio I

As we observe how information is communicated today--and how such communication will likely evolve in the future--it is clear that words and images, sound and motion cannot function independently. They must be integrated and must function synergistically, in the context of education, communication, or entertainment. This course explores how these elements work together for effective communication in a variety of media. Theories of communication, learning, and human-centered design and evaluation, presented and discussed in the graduate seminar course, will inform the design process as students work independently and collaboratively on projects.

Prerequisite: Approval of instructor and concurrent registration in Graduate Design Seminar I.

Fall: 12.0 units

Instructor: Dan Boyarski

### 51-712/51-712 B Grad Design Studio II

A continuation of Graduate Design Studio I, for MAcpd students. This course focuses on the strategic and "global" issues that companies and organizations need to understand as they face a changing and dynamic future. Students learn strategic planning, and are introduced to some unconventional ideas about how the new digital communications environment will be used in the future. Students analyze



a broad situation, prepare a strategic position, articulate an aspect of that position in a design artifact, and make a presentation of the solution. Students may work in teams, depending on the particular project. Prerequisite: Approval of instructor and concurrent registration in Graduate Design Seminar II. Spring: 12.0 units  
Instructor: Robert Swinehart

#### 51-741 Introduction to Computing in Design

This digital studio/seminar course introduces fundamentals of computing that are important for designing digital media. Initially, basic concepts of the computing environment, such as display technologies, input devices, networks, and software, are introduced. Then, students are introduced to various computational concepts that are related to communication design, through hands-on programming exercises. Topics include computer graphics, models of information structure and processes, object-oriented analysis of design problems, and artificial intelligence in design. No prior programming experience is required. Prerequisite: Professional program status or permission of instructor.

Fall: 9.0 units

#### 51-801 Thesis Seminar

##### Thesis Seminar I

In this seminar, students carry out the reading, exploration, and networking required to plan a written thesis and a thesis project. An emphasis on research methods helps students explore a body of literature in their area of special interest.

Prerequisite: Advanced standing in the graduate program and concurrent registration in Thesis Project I. Fall: 12.0 units

#### 51-802 Thesis Seminar II

A continuation of Thesis Seminar I, with emphasis on producing an acceptable written thesis to meet the requirements of the program.

Prerequisite: Advanced standing in the graduate program and concurrent registration in Thesis Project II. Spring: 12.0 units

#### 51-811 Thesis Project I

At the beginning of the second year, each student will propose a studio thesis project and an accompanying written thesis topic. Projects may be individual or collaborative. Students will also identify one or more faculty members to serve as thesis advisors, who will monitor progress on the project throughout the year. Proposals will be submitted to the Program Steering Committee for evaluation and approval. Students will present their projects for public review and critique in the middle and at the end of the semester.

Prerequisite: Advanced standing in the graduate program and concurrent registration in Thesis Seminar I. Fall: 12.0 units

#### 51-812 Thesis Project II

A continuation of Thesis Project I. A mid-semester critique and a final presentation of the project will be made to appropriate faculty. In the case of projects supported by external sponsors, representatives of the sponsor will attend the final presentation.

Prerequisite: Advanced standing in graduate program and concurrent registration in Thesis Seminar II. Spring: 12.0 units



## APPENDIX D: SCHOOL OF VISUAL ARTS

### Course Listings

BFA Advertising/Graphic Design  
MFA Design

#### *First-Year Requirements*

##### AHD1010 Survey of World Art

Two semesters: 2 credits each semester

An introductory course approached chronologically or thematically. Using modern and contemporary art as a focal point, the course will bring out subjects, themes and stylistic tendencies that relate the past to the present. The relationship of the artist to the society of the period as well as the characteristics intrinsic to each art form—painting, sculpture, and architecture—will be explored. Key monuments and important artists will be discussed in some depth. Museum visits will be arranged during the year.

##### FPD1020 Painting and Colour

Two semesters: 4 credits each semester

Study of visual perception through the use of painting media, stressing both technical skills and individual expression; and exploring both form and content.

##### FDD1030 Drawing

Two semesters: 3 credits each semester

This course examines drawing both as an act of creating independent works of art and as a preparatory process in the creation of a finished work. Problems are assigned to study the design elements as they relate to drawing. Both visual observation and basic skills are stressed.

##### FSD1050 Sculpture

One semester: 3 credits

An investigation of perception as it relates to the three-dimensional object. Emphasis is on the exploration of diverse media and their potentialities.

##### GDD1010 Media Communications

Two semesters: 3 credits each semester

The object of this course is to introduce students to the conceptual and technical skills they will need in the field of media communications. Emphasis, however, is placed on “thinking”—on creative problem solving—in areas that range from the abstract to the real and practical.

##### HCD1010 Literature and Writing

One semester: 3 credits

This is the first part of a two-semester required course emphasizing writing and critical thinking to help students build a coherent understanding of the cultural and aesthetic dimensions of classic Western literature. In the first semester, students will read and write about selections from the Bible, Homer and Sophocles, and in the second semester, works by Chaucer and Shakespeare. In both semesters, modern works—both essays and fiction—will be assigned to complement the classic works and reveal how the modern and the ancient works speak about a human history we all share. The course’s focus on expository writing (including grammar, essay development and organization) will help prepare students for upper-level Humanities and Sciences and Art History courses.

*Note: Students are required to take and pass the Proficiency Exam in their first semester at SVA. Those who do not pass the proficiency exam—or do not take the exam—will be required to take HCD0161, Writing*



*Fundamentals I, and/or HCD0162, Writing Fundamentals II. These students cannot continue with the second semester of this course nor continue with any elective Humanities and Sciences courses until they have passed the examination.*

#### **HCD1020 Literature and Writing II**

One semester: 3 credits

This is the second part of a two-semester required course. Please see HCD1010 for course description.

#### **PHD1010 Basic Photography**

One semester: 2 credits

An introductory course in the making and processing of photographs.

#### *Second-Year Requirements*

##### **GDD2020 Basic Graphic Design**

Two semesters: 2 credits each semester

This course is an introduction to the various aspects of graphic communication and will cover concepts, typography, layout and general graphic techniques.

##### **ADD2030 Basic Advertising**

Two semesters: 2 credits each semester

A course that will teach you what good advertising is: how to take a product and give it a unique concept, and how to take that concept and creatively execute it in a rough print ad or TV commercial.

or

##### **GDD2163 - Basic Three-Dimensional Graphic Design**

GDD2177 - Originality

GDD2178 - Textile Design

##### **GDD2050 Basic Typographic Design**

Two semesters: 2 credits each semester

An introductory course covering the fundamentals of type design as it applies to graphic communication.

##### **GDD2060 Drawing**

Two semesters: 2 credits each semester

This course will teach all aspects of drawing, with special consideration for needs of Advertising majors.

##### **GDD2070 Visual Literacy**

One semester: 3 credits

This course is run as an experimental workshop dealing with the various issues of visual communication that pertain to the graphic and advertising worlds. Weekly homework assignments will be based on ideas covered in class. Slides of the work of leading graphic designers, as well as slides and television commercials representing the work of top art directors, will be shown and discussed. There will be guest lecturers.

##### **GDD2090 Computers in the Studio**

Two semesters: 2 credits each semester

An introduction to visual and graphic design on the Macintosh desktop publishing system. The first semester introduces basic Macintosh operating systems, Quark Xpress, Adobe Illustrator and Adobe Photoshop as tools for visual creation. The second semester will combine acquired techniques to create layouts, book covers, advertisements, packages, etc., utilizing complex combinations of the computers and software. A minimum of three hours in the Digital Imaging Center will be expected each week.



### *Third-Year Requirements (Advertising Majors)*

#### **ADD3010 Advanced Advertising**

Two semesters: 3 credits each semester

The class will deal primarily in print advertising with the major emphasis on concept.

*Prerequisite: Two semesters of ADD2030, Basic Advertising or equivalent.*

### *Third-Year Requirements (Graphic Design Majors)*

#### **GDD3010 Communication/Graphic Design**

Two semesters: 3 credits each semester

This course will offer an exploration of various working methods by which graphic designers precisely and effectively solve communication problems. Your solutions will range from roughs to finished comps.

### *Fourth-Year Requirements (Advertising Majors)*

#### **ADD4010 Advertising Portfolio**

Two semesters: 3 credits each semester

This course will focus on developing a finished portfolio consisting of tools that simulate printed samples.

Emphasis will be placed on creating print campaigns.

### *Fourth-Year Requirements (Graphic Design Majors)*

#### **GDD4010 Graphic Design Portfolio**

Two semesters: 4 credits each semester

This course will deal with the making and completion of a graphic design portfolio, consisting of highly finished comps that will simulate printed samples.

*Note: Students must bring a portfolio to the first class for review to be officially enrolled in the class.*

or

#### **GDD4020 Three-Dimensional Portfolio**

Two semesters: 4 credits each semester

This course will deal with the making of a three-dimensional portfolio consisting of highly finished samples.

or

#### **GDD4030 A Portfolio Alternative: Books and Related Material**

Two semesters: 4 credits each semester

Every portfolio can benefit from the inclusion of visionary works. This portfolio class is distinguished from a traditional one by the creation of projects that are primarily experimental and conceptual. We will focus on books as a communication form, and we will utilize other formats such as announcements, kits, pop-ups, CD booklets, image identity, etc. We will explore scale from postage-stamp-size works to large-scale-environmental works. Along with the creative concept, we will discuss the details of the production process of all these projects. Techniques covered will include: die-cutting, embossing, typography, colour-specifying, and printing and binding techniques. We will also examine a variety of modern art movements such as Constructivism, Bauhaus, de Stijl, Dadaism, Futurism and their influences on the contemporary scene.



### *Advertising/Graphic Design General Course Listing*

#### AHD2121 History of Advertising from the 19<sup>th</sup> Century to the Present

One semester, 3 credits

Advertising has influenced our ways of thinking and buying since its inception during the Industrial Revolution. This course focuses on the creative development of advertising from the golden age of poster design, classic illustration in American advertising, advertising photography and the beginning of television commercials in the 1950's. Advertising as the art of persuasion examines the changing role of women as consumers in the 1920s, '30s, and '40s. The creative revolution unfolds through the print and commercials produced during the Bernbach era in the '50s and '60s. The course concludes with a look at today's award-winning creative agencies.

#### AHD2127 History of Graphic Design: A Survey of Graphic Design Styles from the Late 19<sup>th</sup> Century

to the Present

One semester, 3 credits

This course will focus on the various graphic design movements: from the art nouveau movement and Jugendstil to de Stijl and Dada, from the impact of the Bauhaus to the fervor of the streamlined '30s, from the Swiss International style of the '50s to the psychedelic of the '60s and on to the punk '70s and postmodern '80s. We will also examine the subjects, themes and relationship of the designer to the period. Using examples of the period as a focal point, the evolving design styles and their relationship to politics, commerce, social mores, technology, and pop culture will be explored. From the beautiful to the ridiculous, the ephemeral aspects of design will be studied. Guest speakers will feature individuals who have created important design work of the periods discussed.

#### GDD2163 Basic Three-Dimensional Graphic Design

Two semesters, 2 credits each semester

3D graphic design is an emerging field that has opened various job opportunities in a most experimental area. You will be taught to translate your concepts into personalized 3D objects by drawing upon inspiration from all art disciplines. The course will cover many innovative as well as traditional techniques in assemblage, papier-mache, wood, casting, mold making in several media, etc. The class will be augmented by guest lecturers and demonstrations of techniques and procedures.

#### GDD2177 Originality

Two semesters, 2 credits each semester

How can you make your work stand out in the midst of the thousands of visual and verbal messages that bombard the public each day? How can you make your work distinctly, unmistakably yours? By questioning and rethinking your preconceived ideas and assumptions about what makes art, what makes it "good" or "bad," and what applications are possible for your work. You will assign yourself projects that we'll critique in order to identify your unique "fingerprints" and to remove any obstacles to them. We'll consider how standards and influences affect the originality of your ideas and executions, among other issues. New ideas can only result from thinking in new ways; this is the emphasis of the course.

#### GDD2178 Textile Design

Two semesters, 2 credits each semester

This course will concentrate on complete instruction in designing for studio and freelance work. You will learn creative fabric design for the apparel market (dress, men's wear, blouse) and home furnishings market (drapery, sheets, wallpaper). Work will include floral patchwork, geometric, folk and ethnic, liberty, conversational, batik and other designs. We will cover layout, all over, spaced, border and stripe. You will learn how to find and use reference materials and special tracing and drawing techniques using ink, transparent dyes and opaque colors. The second semester includes: how to put a design in repeat; creating color combinations and advanced designing. This course is geared toward producing a portfolio for those seeking a job in today's market.



**ADD3113 Advertising Concepts****Two semesters, 2 credits each semester**

This in-depth workshop class will concern itself with the process of how to create exciting advertising concepts by teaching how to reach consumers in a way that really moves them, by touching a nerve instead of merely giving them the facts.

**GDD3121 The Process****Two semesters, 2 credits each semester**

Nothing stays the same, everything changes; the creative worlds of graphic design and advertising, and the world of applied arts are shifting rapidly and there appears to be a renaissance on the horizon. How can I be open to what is happening? How can I learn to continue to throw everything away and approach each problem in a new, fresh way? How can I be open to what I don't know? In this course, we will continue to explore "the idea" or "the concept" and come to understand "how to think" or how not to think. It will mean the throwing away of the obvious, or the reinintroduction of the obvious. Most of the problems will be abstract, and then applied to what we've learned in solving real problems, graphically for editorial, or design problems, in film for TV or strategically for advertising.

**ADD3174 Advertising/Art Direction****Two semesters, 2 credits each semester**

We'll explore the techniques and technology necessary in art direction. Students will make their own photos, design type and make their own images. The art director is a hybrid—concept maker and concept designer. The class will deal with traditional views but mostly with cutting-edge material. There will be an emphasis on individuality, freedom and creativity.

**GDD3181 Advertising for Graphic Designers****Two semesters, 2 credits each semester**

The blending of strong concept (idea) with unique executions. Solving Advertising problems without relying on words. Exploring with the use of pictorial icons and archetypes to communicate advertising messages. (Push the envelope to create work that scares you.)

**GDD3227 Advanced Quark and Photoshop for the Graphic Designer****Two semesters, 2 credits each semester**

You will learn to personalize Quark Xpress and Adobe Photoshop, not to be ruled by the program but to use the program as a creative tool. This course is specifically tailored to the graphic designer's needs by focussing on the tools of these programs and to execute pieces from start to finish. A major piece with multiple pages will be produced. This piece will involve personal photography, layout, concept and type. You will develop a complete understanding of the output process for your portfolio needs including Canon Fiery, Cactus, Linotronic, and others. Also, this course will include field trips to service bureaus and discussions of some general knowledge of preparing your file for four-color or spot-color printing.

**GDD3233 Digital Production Tools and Techniques****One semester: 2 credits**

In addition to visualization and design skills, today's graphic artist is increasingly required to have technical knowledge and production ability. This course offers complete instruction in the skills needed to make solid, workable files. Using Quark Xpress, Adobe Illustrator and Photoshop, we'll examine all aspects of production as they relate to print, including correct document construction, skills for group document handling, correct use of master pages and style sheets, colour space and colour systems, separations, trapping, preflight, print production and paper considerations. We'll also examine some special topics, including multimedia and Web considerations, working with databases and specialized ideas about binding. Note: Students must have a working knowledge of Quark Xpress, Adobe Illustrator and Photoshop.



**GDD3314 Images in Mixed Media: Traditional Through Digital****Two semesters: 2 credits each semester**

This course will explore the use of mixed media, using flat and dimensional art, model making, photography and computer manipulation to produce a final image. Various methods of combining media will be explored. This course will bridge conventional techniques with photography and digital imaging. Students will be given assignments that exploit maximum potential to mix techniques, yet retain the artist's individual style.

**Note:** Students should have basic photo and computer skills.

**GDD3331 Toys and Games: from Concept to Finish****Two semesters: Two credits each semester**

The toy industry is a trendy business, where many new ideas and designs are introduced each year. Through exploring the different categories of the toy industry (games, puzzles, dolls, cars, action figures, preschool), and looking at some of the best ideas in each category, students will learn what toy ideas actually are and how to originate them. Students will be encouraged to experiment with ideas that are interesting and meaningful to them, and may work on any product they choose. How to make prototypes and what materials and tools to use will be demonstrated. The instructor will bring in actual prototypes of ideas that have been manufactured and sold in toy stores. Students will learn all strategies of how an idea evolves into a finished product. The goal of this class is to have each student develop at least one product each semester, suitable for presentation to a toy company or for inclusion in a portfolio.

**GDD3348 Drawing for Graphic Designers****Two semesters: Two credits each semester**

What art directors are waiting for is not only new talent, but new ideas, new points of view, new style—in other words, a renewed vision of what has taken place before. The purpose of this course is to help students to discover their own creative imaginations rather than what has been brought to them from the outside. By means of naturalistic supports (live models), a study of forms as expression of a language will be undertaken. Students will be encouraged to unveil their own genuine originality, discover the appropriate means to express their feelings and convey their ideas.

**GDD3403 Three-Dimensional Design and Illustration****Two semesters: Three credits each semester**

This course will deal with design and illustration solutions to problems that involve making 3-D structures. Discussions about methods and materials will include everything from fiberglass to hubcaps: whatever conveys the designer/illustrator's ideas. There will be demonstrations of various techniques like mold making, paper and cardboard construction and casting in plastic. Although problems will be given in class, students may bring in assignments from other courses to be completed in this one. You will produce finished pieces that may be photographed for your portfolio. Guest lecturers will include professional designers and illustrators who have successful careers based on 3-D work.

**GDD3424 Corporate Identity****Two semesters: Two credits each semester**

Corporate identity is the entire image of a large corporation or a small company. How the company wants to present itself, its products and its services to the public should add up to a simple, strong identity. Students will be confronted with analyzing and defining the chief needs and characteristics of the company through direct contact and personal research. Symbols, logos, stationery, brochures and their grids, packaging, vehicle graphics, signage, advertising, etc., will be explored.

**GDD3431 Communications Concepts****Two semesters: Two credits each semester**

1. Problem: communications chaos.
2. Objective: remove the decorative surface of communications.



3. **Strategy:** inject the priority of content before form.
4. **Solution:** approach the issue of communications via a concept.

Separate technology from the final message. The technology is: drawing, sculpture, history of art, painting, design and design dynamics, mechanics via computer/production. These are the tools of the message, not the message. Concept must come before technology or there is no place for technology to go. Technology without content is chaos. This will be an in-depth exploration of concept formulas blanketing the 30 weeks. Vital to the course is an awareness of current social and political behavior.

#### **GDD3438 Conceptual Design**

Two semesters: Two credits each semester

Beyond decoration and artifice there is a school of design that has a deeper resonance. To design in this manner places the designer as active creator, editor, and author of ideas, rather than a passive participant or sales adjunct. The designer is enabled to communicate directly with the viewer, rather than simply demand their attention. This course will focus on all aspects of conceptual design. How do you give the client much more than what is expected? What tools are necessary to produce conceptually based design under the pressure of deadlines? How do you tap into your creative unconscious? Materials will include any means needed to solve the problem: construction, collage, archival sources, illustration, etc. Assignments will include, but not be limited to, book covers, editorial illustration (yes, for the graphic designer!), CD covers, posters, self-promotion.

#### **GDD3447 Experimental Book Art**

Two semesters: Two credits each semester

In this course, students will draw upon their own creativity and vision to produce projects. The experimental and conceptual aspects of creating books will be stressed. We will explore various production ideas from the one-of-a-kind book to mass-produced books. Instruction will be given on a wide range of printing techniques—typography, binding, embossing, ink selection, paper die cutting—which will then be integrated with the projects. There will be field trips illuminating the creation and production of books. Specific historical information including the Bauhaus, Constructivist and de Stijl movements, which were so important in the evolution of contemporary books will be studied. Students will be required to create several unique books.

#### **GDD3454 Real World Graphics: A Survival Course**

Two semesters: Three credits each semester

Structured much like a small design firm or advertising agency, this class will show you what really happens in the real world. All work is done in creative teams and projects are created, executed, and presented to professionals for instant feedback. This is as close to a real world situation as you can get in a school situation.

#### **GDD3461 Graphic Design for Television**

Two semesters: Two credits each semester

Students will examine methods of creating innovative logos and promotional imagery for TV stations and programming. Study will include current technology used to process, layer and texture live footage and to develop original electronically generated designs. Focussing on TV broadcast design and how it differs from creating traditional print images, we will explore the elements of colour, shape, motion, and sound. Lectures by established designers and visits to TV studios and post-production facilities will expose students to the conceptual and production technological aspects of TV graphics. By the end of the course, students will have a network-level storyboard for their portfolios.

#### **GDD3466 Poster Design**

Two semesters: Two credits each semester

For years poster design has been a unique way of communicating. It's also an exciting and personally expressive form of art. This workshop course will provide specific experiences that are focussed on



technical, historical and aesthetic issues in poster design. Emphasis will be on visual rhetoric and application of rhetorical principles within visual imagery. Students will produce creative and effective solutions utilizing type and image as a principle means of communicating. Interpretation, composition and presentation skills are stressed.

#### **GDD3472 CD Package Design**

Two semesters: Two credits each semester

This is a comprehensive course that will introduce all aspects of design in the record business. This course will take you from concept to finished piece. Projects include albums, single sleeves, CD special packaging, special CD labels, posters, ads, and brochures.

#### **GDD3473 Package Design**

Two semesters: Two credits each semester

This is a comprehensive packaging workshop dealing with good design, from initial concept to printed piece and display in the marketplace. There will be a strong emphasis on logotype design and package copy typeface selection, and a discussion of materials (glass, metal, plastic, paper), printing methods and market research. You will learn to develop comps from rough through finished stage for presentation. We will study American packaging in various industries (food, toiletries, liquor, etc.), along with a comparison of packaging around the world. There will be an emphasis on original ideas and good design within the client's and the FDA's limits (and realistic deadlines). Discussion of career opportunities with the tremendous growth of the packaging industry will take place.

#### **GDD3511 Editorial Design**

Two semesters: Two credits each semester

This course is a survey of the general principles of editorial design. It will deal with magazine and book cover design, page layout, typography, thumbnails and comps.

#### **GDD3527 Designing with Typography**

Two semesters: Two credits each semester

This course will concern itself with the use of typography as the basic material of communication. Typography will take the place of the image, design, illustration or photography to convey a message. We will study the proportions and character of typefaces and the main variables of the letter form. We will experiment with the use of type in posters, book jackets, newspaper and magazine page layouts, stressing the importance of typography in visual communication.

#### **GDD3533 Typography and Design**

Two semesters: Two credits each semester

This course will teach you about the major tool of all designers and art directors: typography. You will learn how to use typography effectively as a design element, and how to control the details of its use—skills that separate good designers from bad in the professional world.

#### **GDD3541 Graphic Design Studio: Finding Your Own Graphic Personality or Style**

Two semesters: Two credits each semester

This is a studio course where you will be required to work in class. Experimenting with traditional art materials will be included as well as: computer drawing, painting, collage and 3-D design. Crits will be held on an individual basis: brainstorming will be investigated as an intricate problem-solving component.

#### **GDD4114 New-Media Design**

Two semesters: Two credits each semester

Everybody is raving about the tremendous change that graphic design is undergoing. Graphic design is still about communicating a message, and about putting together form, composition, typography



and colour so that the message can come through. Yet, the means and mediums are changing: computers, TV screens, CD-ROMs, information kiosks, Internet gateways, and, of course, all of the traditional print communication channels. This course explores the new venues and the new tools. Students will learn how to implement the concept, the work process, the technicalities of design and new presentation methods onto the new means of media: computer screens, CD-ROMs, Internet Web pages and more. We will study other design perspectives: information design, navigation design and interactive design; and explore the uses of a new toolbox: interactivity, 3-D animation and digital video in order to enhance the coherence, visibility and power to attract a communicated message. Finally, we will examine the process of designing an identity and/or board so it evolves successfully on all mediums, from magazine ads to Web sites. The aim is to have at least one “real world” assignment in which students will work on a real product with a client.

Prerequisites: Photoshop, Illustrator and Quark Xpress

#### GDD4121 Graphic Design for the Internet

Two semesters: Two credits each semester

This course will explore how to effectively design for the new evolving interactive media—the Internet—from conceptualizing Web sites to finished portfolio pieces. From the printed page to the Web page, through the design process itself, students will apply the basic principles of design and typography to communicate information within a very special framework and technology. Students will gain an understanding of what this new industry offers now and what it will offer in the near future. There will be guest lecturers from the industry.

#### MFA Design

##### *First Year Courses*

#### DSG 5020 Books: From Idea to Package to Consumer: Writing, Designing, Editing, Packaging, & Marketing

Spring Semester: 3 credits

Creating the overall design concept for a book that has commercial as well as artistic appeal is the aim of this course. A range of formats and genres will be discussed—illustrated books, children’s books, interactive, and non-illustrated (fiction and non-fiction). The “book” will be discussed and scrutinized from editorial conception to design to production to sales and marketing. Key to the examination will be the “client” and how to meet its needs and expectations while maintaining creative integrity. Throughout the course, working independently, students will develop a portfolio of book concepts and related covers and layouts for various formats. Each student is responsible for extensively developing one entire book dummy of such quality and commercial appeal to be suitable for submission to publishers for publication review.

#### DSG 5050 The Magazine Workshop

Fall semester: 3 credits

The dual purposes of this course are: to give designers a critical and historical understanding of magazine publishing, and to offer the practical tools needed to become more involved in all stages of magazine production. Students will be presented with a wide range of information regarding periodical publishing, past and present, including careful reading of critical and historical texts on the subject matter as well as visits to museums, editorial offices, and printing facilities. Writing, editing and design skills will be developed through a series of hands-on assignments. The class will be divided into small groups at the beginning of the semester, and each group will be responsible for the creation—from concept through execution—of a complete magazine, whose “dummy” issue will be presented at the end of the semester. The course will emphasize the designer’s role in creating, as well as framing, content, in the magazine publishing field.



**DSG 5060 Design for Television: Graphic Design Using Time, Motion & Sound**  
 Fall Semester: 3 credits

The class is a semester-long project in which the students are asked to create an identity for a new television channel of their own invention unrestricted by its commercial value. This will be done through understanding the content of their channel, designing its logo and ultimately producing three short image spots promoting the channel. This main assignment will be peppered with smaller assignments that will explore the different ways a designer is asked to solve problems using the moving image.

**DSG 5070 Crossing Disciplines: Expanding the Design Media**  
 Fall/Spring Semesters: 3 credits each semester

The purpose of this course is to provide an advanced overview of how digital designers combine the best of new technology and traditional aesthetics to produce work that satisfies commerce and the mind. Design for electronic media is multi-disciplinary by definition. That is its potential strength and weakness. A good designer must successfully navigate and integrate traditional design concepts, computer programs, motion graphics and sound issues. This class will explore how a designer can best utilize and master multimedia, while not letting the focus of their design suffer. In particular: What are the constraints as well as the advantages of a chosen delivery vehicle? What's the right software and why? When is it best to learn a program or hire a programmer? What is the best forum for your work and your client's objectives: A Web site? A CD-ROM? A DVD? A kiosk? A book? Only by mastering the basics of technology and the fundamentals of good design can students make successful, fulfilling work.

**DSG 5080 Paul Rand Lectures**  
 October 4 and November 9, 1999  
 Fall Semester: 0 credits

During the first year there will be four lectures honoring the life and work of Paul Rand, long considered the master of modern American design. The first two lectures will introduce and address the full range of Rand's accomplishments, while the remaining two will explore additional areas of design history as influenced by Rand.

**DSG 5190 The Internal Museum**  
 Fall/Spring semesters: 3 credits each semester

Joseph Cornell's "acts of sharing and 'visual possession' brought images into his inner museum" Utopia Parkway, Deborah Solomon.

We all collect something, whether personal artifacts (letters, photos, mementos) and preferences (favorite colors, foods, movies), or found or purchased objects and ephemera. These things contribute to our sense of who we are, and we draw on them, consciously or not, when we create. The class will explore the notion of the "collection" and the "museum" (Class Oldenburg's Mouse Museum, Duchamp's Valise and the Museum of Jurassic Technology, in Los Angeles, are some examples), and use these explorations to inform and structure assignments. We will also maintain and contribute to an ongoing "design museum."

**DSG 5130 Writing and Designing the Visual Book**  
 Fall Semester: 3 credits

This course combines the ideas and skills inherent to design and literature towards an integrated, meaningful expression. Throughout the semester students will develop their creative writing skills through a sequence of exercises in continuous writing, observational writing, titling objects and images, theatrical improvisation, storytelling, writing from different points of view, structuring a narrative, writing as visual composition, reworking and editing. Selected texts from writing exercises are then set into a variety of book formats using any combination of typography, images and symbols. Emphasis is placed on finding a visual form that emerges out of the meaning, feeling and inherent shape of an original text. Historical and contemporary examples of "visual text" will be presented. The course focuses on the book format as a primary vehicle.



### DSG 5120A Design for Music

Fall Semester: 3 credits

This class will (literally) cover all aspects of graphic design for the music industry. Students will design a complete CD packaging inside a plastic jewel case, a free for all 'special packaging' as well as promotional items for the same project, ranging from match books to billboards, from Web sites to videos, resulting in an entire campaign for one musician/band/orchestra. We will concentrate on innovative solutions for the visualization of music.

### DSG 5040A Visual Languages: Personality for Institutions, Corporations and All Other Establishments

Spring Semester: 3 credits

In the class, students will develop a visual language to complete all the needs of a massive institution or retail chain. Projects will include identity, package, publication and signage design, as well as urban planning.

### *Second Year Courses*

#### DSG 6010 The Integrated Studio

Fall and Spring semesters: 6 credits each semester

The goal of the second-year studio will be to model and test, under dynamic conditions, the prototype Integrated Studio of Tomorrow—an environment characterized by active collaboration among practitioners from several creative disciplines. The course takes as its premise that new media are dissolving the established distinctions between fields such as graphic design, video, photography, architecture, illustration, and animation, among others, as they are currently defined by academia, professional training, and membership organizations. As the boundaries between these disciplines becomes progressively less distinct, hybrid skills—transcending design, communication and production—will be needed in order to succeed as a practicing designer. The Integrated Studio will give an overview of the structures in professional fields that have traditionally involved collaboration among several parties, particularly in architecture and filmmaking, where a team is often assembled for a specific project and then disbanded, though working relationships between individuals typically last over many successive projects. We will explore existing structures of collaboration through readings, seminars, and studio visits. The social and economic changes which are occurring as a result of, and/or necessitating, the globalization of media will be examined, so that students gain an understanding of the wider context in which their services will be sought out and rendered.

#### DSG 6030 Intellectual Property and the Law

Fall semester: 3 credits

This course will examine the general concepts of law and Intellectual Property law as it applies to the practice of design. The basic legal issues of contract and property law, within the creative context, will be examined. Among the topics explored will be the work for hire agreement, the consignment agreement, and the agency agreement. The law of copyright, trademark and patents will also be explored. Issues such as registering a copyright, copyright infringement and patents (in particular design patents) will be examined from the perspective of the professional designer. In addition, design and information issues presented by new technology, such as the Web, will be included throughout the context of this course.

#### DSG 6050 Thesis Consultation (Preparation)

Fall Semester: 6 credits

Instructor: Ellen Shapiro

This course will enable students to do the preparatory work needed to identify a product suitable for full-scale development. Students will be required to prepare and submit a finished proposal to the faculty for its approval. Students may not enroll in the second semester of this thesis until their proposal has been approved.



**DSG 6070 Thesis Consultation (Production)**

Spring Semester: 6 credits

With the aid of a faculty advisor, students will complete a thesis project, a finished product, ready to be marketed. Students will be required to make a final presentation to the faculty for their approval. The MFA degree may not be conferred without approval of this final project by the faculty.

**DSG 6090 Seminars**

Fall and Spring semesters: 3 credits each semester

To enliven the program and bring students into contact with a significant number of working professionals, each semester a series of seminars will be structured. It is anticipated that seminar topics will change from year to year, based upon student interest.



## APPENDIX E: ILLINOIS INSTITUTE OF TECHNOLOGY

### Course Listings Institute of Design

#### ID 500 Value

Explores the act of valuation as it relates to decision making and the interaction of people with information and products. Issues considered include aesthetic judgment, social symbolism, priority assignment, social and cultural influences, absolute and relative values, elements of criticism, and ethical choice.

#### ID 501 Structure

Explores the nature of structure in both the physical and symbolic domains. A number of viewpoints are used to examine the structure underlying familiar phenomena. Among the structural concepts considered are relations, order, networks, hierarchy, modularity, symmetry, and pattern.

#### ID 502 Form

Investigates the qualitative characteristics of form. Form is the manner or style of composing the elements of objects, images, text, and other man-made items that can have social and aesthetic significance. Particular attention is paid to the relationship between form and function and between form and meaning.

#### ID 509 Image

Explores the means for conveying interpretive and expressive information through visual sign systems. Several signs are discussed, including photographs, film, drawings, diagrams, physical models, and abstract marks.

#### ID 510 Principles and Methods of Design Research

Introduces the basic principles and methods for assembling, developing, and analyzing information in the tasks of design research. Techniques for collecting data, testing hypotheses, and presenting conclusions are learned in the context of conducting a pilot research project.

#### ID 511 Philosophical Context of Design Research

Explores the philosophical framework for conducting research and building knowledge in the field of design. Topics include concepts from epistemology, phenomenology, and structuralism. Comparisons are made between design research and research in other fields.

#### ID 512 Social Implications of Design

Explores the impact of design on social patterns, culture values, and economics. It includes historical examples as well as information that relates to contemporary international relations. Ethical issues of importance to the design profession are an important aspect of the discussions.

#### ID 513 Human-Centered Design

Introduces students to the broad context of human factors including physiology, cognition, and social and cultural patterns. Both the principles of these areas and the methods of research are covered.

#### ID 514 Design Planning

Introduces students to the context of design planning. It includes a discussion of the general forces acting upon an organization—competition, technological developments, channels of distributing information and products, and how to understand the people who use design. Particular attention is paid to how, within the context of all of these forces, design can benefit an organization.



**ID 515 Design Policy**

Investigates the formation and intent of design policy by governments across the world. Particular attention is focused on the relationship of organizations implementing these policies to the political and economic structure of different countries, and on measures assessing their success.

**ID 520 Communication Planning**

Presents and demonstrates the principles and methods of formulating a plan for a communication project. It is particularly concerned with the relationships between the project plan and the organization's overall design strategy and policy.

**ID 521 Product Planning**

Presents and demonstrates the principles and methods of formulating a plan for a new product. It is particularly concerned with the relationships between the project plan and the organization's overall design strategy and policy.

**ID 522 Technological Development and Design Innovation**

Concentrates on the exploitation of developments in material and manufacturing technology as a critical component in innovative design. Case studies are used to analyze the development of new products from precursor advancements in the technologies of materials and/or manufacturing. Product development is considered from perspectives of project management, interactions among different technological domains, and the metaphoric transformation of design problems by design and development personnel aware of the technological advancements.

**ID 523 Rule System Description Language**

Focuses on the theory and application of rule systems to the description of products and messages. The needs of post-industrial communication and manufacturing production processes are matched to a flexible, advanced design description language capable of preserving design intent while defining limits and variability.

**ID 524 Strategic Design Planning**

Focuses on how the processes and goals of design planning can relate to the overall strategic plan of an organization. It includes topics related to technological innovation, market trends, financial analysis, and other forces that influence the future of an organization.

**ID 525 Design Planning and Technological Innovation**

Shows how design relates to technological change in media, manufacturing, and products. Special attention is paid to the confluence of computing and communication, flexible production systems, and the increased use of sophisticated electronics in control systems of products.

**ID 526 Design Planning and Market Forces**

Focuses on methods in design planning that build information about how products and information should be used. It includes a comparison of marketing and design planning as distinct processes for developing new products, services, and information.

**ID 527 Assessment and Prediction Methods**

Discusses mathematical and non-mathematical methods for predicting and forecasting trends in social and technical fields. Assessment techniques are introduced for evaluating alternative design solutions on the basis of their potential impact on existing social, cultural, physical, and other environmental contexts of concern.



**ID 528 Advanced Design Planning**

Presents students with background information about the forces influencing a design problem. Using knowledge about planning processes, students will be asked to write a design plan that describes the relevant methods and predicted solution to the problem.

**ID 530 Information Structuring**

Introduces concepts for establishing relationships among elements of information and creating information structures from them. Theoretical models for measuring similarity and interaction are developed and used to create graphs representing information networks. Computer techniques are presented for decomposing these structures into clusters and hierarchically recomposing them as information structures.

**ID 531 Computer Applications in Design**

Introduces students to the construction of computer programs for design. Issues of program design are considered including modularity, data structures, computer graphic modeling, interface design, and other aspects of programming for the support of design processes.

Prerequisite: ID 468 or consent of instructor.

**ID 532 Computer-Supported Design Processes**

Continuation of ID 531, with emphasis on advanced graphic techniques and artificial intelligence procedures for the support of design processes. Primary emphasis is on writing a complete design software application program. Prerequisite: ID 531 or consent of instructor.

**ID 533 Design Analysis**

A survey of design methods from many fields concentrating on problem definition, description, and analysis. Among the topics covered are diagrammatic techniques for process and organizational description, semantic differential techniques, means/ends analysis, and morphological analysis.

**ID 534 Design Synthesis**

A survey of design methods for enhancing creativity and developing concepts. Topics include morphological synthesis, a wide variety of creativity stimulation techniques, synectics, and other group creativity processes.

**ID 535 Decision Support Techniques**

Covers methods for decision-making and evaluation in design. Topics include criterion function analysis, decision-making under varying conditions of certainty, utility theory, Delphi techniques for obtaining group consensus, and game and metagame theoretic processes for competitive decision-making.

**ID 536 Form Generation Processes**

Techniques for describing rules of formal relationships for the generation of two- and three-dimensional forms. Shape grammars, symmetry generation rules, growth systems, cellular automata, and other approaches are studied as means for generating and modifying forms.

**ID 537 Artificial Intelligence and Design Problem-Solving**

Introduces a variety of problem-solving and heuristic paradigms from artificial intelligence and cognitive science and explores their application in different types of design problem-solving processes.

**ID 538 Design Simulation Programming**

Presents the elements, structures, processes, and programming of simulation systems for design. Discrete and continuous, deterministic and stochastic, quantitative, and qualitative modeling systems are analyzed for how they operate. Advantages of different approaches are explored, and means for creating models and connecting them to input, output, and graphic processes are discussed. Prerequisite: ID 468 or consent of instructor.



**ID 539 Data Structures and Cellular Modeling**

Introduces the special computer data structures and operational procedures necessary for cellular modeling. Theory and processes are presented for describing solid models from systems of elemental three-dimensional cells. Means for creating cellular models, altering their attributes, and displaying them are studied. Prerequisite: ID 468 or consent of instructor.

**ID 540 Advanced Communication Design**

Involves students in practicing methods for rapidly developing prototypes that demonstrate appearance and/or functional aspects of potential messages. The class will include evaluation methods that are useful in the process of iteratively developing and testing alternate solutions.

**ID 541 Advanced Product Development**

Familiarizes students with the nature, methods, and design implications of current mass production practice and trends. Addresses the translation of product production by anticipating development needs in all portions of the manufacturing organization.

**ID 542 Advanced Control Technology**

Analyzes the control structures of "smart" products from the standpoints of the human operator and the machine. The tasks of machine and operator are studied to find optimal designs for both. Using sample products as reference examples, improved, human-factored control systems are explored and computer software is designed to perform the control functions.

Prerequisite: ID 467 or consent of instructor.

**ID 543 Intelligent Products**

Applies the control technology concepts developed in ID 542. A conventional product is redesigned to improve its functionality. Control requirements are assigned to human or machine responsibility, the interface is designed, control processes are programmed, and a breadboard or prototype product is built to test the design.

Prerequisite: ID 542 or consent of instructor.

**ID 544 Interface Design**

Focuses on user-computer interface design. Topics included are cognitive models, interactive techniques, sign systems, display organization, and prototyping methods.

Prerequisite: Working knowledge of computer programming.

**ID 545 Interactive Media**

Introduces students to the principles of integrating electronic publishing, interactive video, and computer graphics. Emphasis is on social and cognitive human factors and the use of multiple sign systems.

Prerequisite: ID 544 or consent of instructor.

**ID 546 Diagram Development**

Explores the language of diagrams and alternative techniques for increasing communication effectiveness. Subjects of study include computer-based diagrams that introduce interaction and motion to convey meaning.

**ID 550 Behavioral Analysis and Design**

Introduces information about the perceptual, cognitive, and behavioral reactions of people in the context of their interactions with machines and environments. Students are taught methods of observation, documentation, and analysis. These include questionnaires, ethnographic methods, protocol analysis, and techniques from the behavioral sciences.



**ID 551 Cognitive Human Factors**

Presents the advanced ideas and methods that can be used to design information and products that fit the cognitive abilities of people. Important topics include the design of information that corresponds to mental models of users, control systems that help users develop appropriate mental models, and the analysis of different methods of representing information.

**ID 552 Social Human Factors**

Presents advanced ideas and methods used to design information, products, and environments that fit the social patterns of groups. Particular attention is paid to understanding and designing systems that support group work.

**ID 553 Cultural Human Factors**

Presents ideas and principles used to understand the relationship between design and cultural values and behavior. Emphasis is placed on designing information and products for people who are from significantly different cultures.

**ID 554 Visual Language**

Discusses pictures, abstract symbols, text, numbers, diagrams, three-dimensional form, and other sign systems. Particular attention is paid to the relative advantages of each representation system for conveying different types of information.

**ID 555 Metaphor and Analogy in Design**

Investigates the ideas and methods for creating visual messages through comparing, juxtaposing, and substituting images within specific contexts. Discussion will include issues of similarity, such as isomorphism and analogy; the connotative attributes of images; and the dissonance found in metaphors and other rhetorical forms.

**ID 556 Meaning and Form**

Focuses on how the visual appearance of products and information can convey specific information about the purpose of the designed item and how it should be used.

**ID 557 Dynamic Diagrams**

The study and development of real-time, computer-based diagrams for pattern finding and pattern communicating. Particular attention is paid to the roles of motion, interaction, sound, and modes of manipulation that can be combined with 3-D models and traditional diagrammatic sign systems.

Prerequisite: ID 546 or consent of instructor.

**ID 558 Theories of Information and Communication**

Describes general paradigms of information and communication. Particular attention is paid to models that consider the importance of the values, behavior, and knowledge of the people for whom the information is intended.

**ID 560 Computing and Photography**

An introduction to photography in a digital context. Students will study the changes in the temporal and spatial characteristics of optical media when manipulated by digital image processes. No programming is required. Students will work with existing software.

**ID 561 Image Processing Applications**

Focuses on planning and developing photographic image processing applications. Concentrates on the creation of imaging procedures that extend the capabilities of existing software tools on human interface problems. Requires a knowledge of computer programming.



**ID 562 History of Photography to 1912**

Covers the history of mechanically aided, optical imaging up to the invention of photography and the development of photography in the 19th century, including photomechanical reproduction. The emphasis will be on the impact of photography and photomechanical reproduction on other media and on the culture as a whole.

**ID 563 History of Photography 1913 to Present**

Focuses on the history of photography in the twentieth century including the various traditions, movements, and aesthetics that shaped mass communication, the fine arts, and the development of an image/information society.

**ID 564 The Nature of Documentary Projects**

Studies various forms of documentary projects on film, video, still photography, and non-fiction writing. Depth of exploration and investigation separates the documentary project from traditional journalism.

**ID 565 Documentary Methods**

This is a studio documentary photography course using two separate points of view to describe a subject: first, finding the subject by exploring and photographing within a larger context, and second, inventing a subject from a political or theoretical point of view and illustrating it through photography.

**ID 566 Special Topics in Documentary Photography**

A lecture course by noted experts from fields related to the theme of a current documentary project. Topics will include historical, social, and physical contexts.

**ID 567 Historical Precedent in Documentary Imagery**

Discusses the history of photography and the work of photographers who have made images related to the current project theme.

**ID 568 Project Research**

A directed research course based on a specific topic or issue presented in ID 567.

**ID 570 Case Studies of Advanced Design Projects**

Involves students in reading and discussing the role of design in the context of case studies. Particular attention will be paid to the relationship between design and other forces influencing the goals of the organization. Case studies may relate to either design planning or human-centered design.

**ID 571 Case Study Development**

Focuses on the methods of researching and writing a case study of a significant project in either design planning or human-centered design.

Prerequisite: ID 570.

**ID 572 Systems and Systems Theory in Design**

Investigates principles and methods for exploring the behavior of systems. System dynamics techniques are used to model design concepts with the goal of revealing complex, non-incisive relationships. Important topics include general systems theory, modeling, causality, and formalisms.

**ID 573 Introduction to Design Studies**

This course will introduce students to principles of historical research and presentation methods applied to the techniques, theories, practice, and context of modern design. Relevant texts from the field of design and related disciplines will be used to analyze significant methodologies. Projects will combine an exploration of theory and its application to design practice.



**ID 574 Design History 1**

A general thematic introduction to the history of design with topics chosen to illustrate how the processes of shaping and communicating have changed through history. The purpose is to understand design in terms of generic models, the nature of which can be discerned across different cultures. A broad range of examples will be explored and their relevance to models of contemporary practice will be discussed.

**ID 575 Design History 2**

This course examines design in the United States since World War II, as a platform for developing skills in research and communication. It consists of two elements: The first is an examination of the extent to which the generic models established in ID 574 Design History 1. manifest themselves in the U.S. Emphasis will be placed on the evolution of design methodology and planning. The second is a short research exercise into a topic covered by the course with presentation to publication standards.

Prerequisite: ID 574 Design History 1.

**ID 576 Design Criticism**

Develops ideas and experience with the creation of critical frameworks for design. Historical, functional, cultural, ecological, and other contexts are considered. Communication issues relating to evidence, point of view, selection of language, and demonstration are integrated into publishable outcomes.

Prerequisite: ID 575 Design History 2.

**ID 580 Design Workshop**

Involves students from across the programs in projects that demonstrate how new theories and processes can be applied to complex design projects.

(Credit: variable)

**ID 581 Photography Workshop**

Involves students in a major project that is in the context of contemporary ideas in photography.

(Credit: variable)

**ID 586 Graduate Seminar in Design**

Explores contemporary topics of importance to the field of design.

**ID 87 Graduate Seminar in Photography**

Explores contemporary topics of importance to the field of photography.

**ID 590 Research and Thesis for MS Degree**

(Credit: variable)

**ID 592 Research and Demonstration Project for MDes Degree**

(Credit: variable)

**ID 598 Special Problems**

Topics change each semester.

(Credit: variable)

**ID 691 Research and Thesis for Ph.D.**

(Credit: variable)



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American Institute of Graphic Arts: <http://www.aiga.org/>

California Institute of the Arts: <http://www.calarts.edu/>

Carnegie Mellon University: <http://www.cmu.edu/cfa/design/>

College Art Association: <http://www.collegeart.org/>

Graphic Design or Visual Communication: Product vs. Process: [http://www.adcmw.org/paul\\_nini.html](http://www.adcmw.org/paul_nini.html)

Graphic Design Schools on the Web: <http://www.sensebox.com/schools/>

Graduate Schools Directory: <http://www.gradschools.com/search.html?clicktrade=171710>

Illinois Institute of Technology: <http://www.id.iit.edu/>

JADE: Journal of Art and Design Education: <http://212.250.85.130/nsead/html/journal.html>

Jodi Forlizzi: Interaction Design: <http://goodgestreet.com/welcome.html>

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*Additional resources: All available and solicited information pamphlets, course syllabi, project briefs, examples of student work and other curriculum-related materials from: The University of Alberta, California Institute of the Arts, Carnegie Mellon University, The School of Visual Arts, and Illinois Institute of Technology.*



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